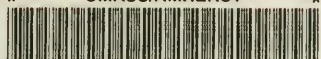


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GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. III

January, 1875.

No. 1

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. Clarke, and Mrs. Tupper.

Bee-Keeper's Magazine. King.

Bee World. A. F. Moon & Co.

[Also Bound Volumes of the former since 1863, and Files of all other Bee Journals that have been
Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

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SUNDRY MATTERS.

MR. DRAPER has sent us a sample of his straw mats, which, although they may do very good service, are quite inferior in workmanship to those made by friend Nevins. As the prices are less, perhaps both are a fair equivalent for the money asked.

MANY questions are asked in regard to matters treated most thoroughly in former numbers. As a great part of our readers have GLEANINGS from its commencement it would be doing them an injustice to go over the ground again. We will always indicate where the answer to questions will be found and can supply Vol.'s 1 and 2, neatly fastened together in book form for 75c each, or the two for \$1.50, Lithograph included.

For the very low price of \$2.00 or \$1.50 in clnbs, you can get that bright pretty paper, the *Prairie Farmer*, every week for a whole year. Their articles on bee culture have been when copied so well selected, and when original so directly to the point, that it has for the past year been a particular favorite among our exchanges. Our western subscribers will certainly find it to their interest to give it a place in their homes. Sent with GLEANINGS for \$2.65 including all postage.

WE were agreeably surprised on getting hold of the *Fruit Recorder and Cottage Gardener* to find a periodical in many respects so similar in plan and design to GLEANINGS, only that friend Purdy talks of fruit, while we talk of bees. Our readers can *every one of them*, at least send to him for sample copies, and then if they think they can afford to do without the paper they certainly will look at it differently from what we do. We can furnish it with GLEANINGS for \$1.50 including all postage, see advertisement.

In speaking of Imported Queens on another page, we spoke only of those we had tested in our own apiary. Although we have never tested the Dadant importations, of course they have the same qualities as our own. We sent them an order in '72 for two Queens but the money was promptly returned on account of their losses that year. In regard to the decision at the last National Convention, Mr. D. writes:

When we read the report of the Beekeepers Convention, we immediately wrote to Mrs. Tupper & to King for an explanation. Mrs. Tupper answered: "I said no such thing as I am reported as saying at the Convention. Some one asked me if there was not danger of Italians in Italy being mixed with Egyptian blood, and I replied that I did not think any Egyptian had ever been carried to Italy and that I had received fine queens always, though I thought pure Italians were improved by being brought to our climate. I have corrected it in January No. E. S. T."

King says: "The report in A. B. J. is incorrect. I never uttered such language. I was absent from City when Dr. Rush's report was received but returned in time to promptly correct many incorreced statements, &c. H. A. K."

We wrote to Dr. Rush to find where that came from. What do you think of it?

Ch. D. & Son.

One who attended the convention stated very positively, substantially the same as the reporter, even before it came out, i. e., that importing from Italy was not to be encouraged. Benedict clearly had a motive for this, but as Mrs. Tupper has advertised and sold imported Queens largely, even recently, we are puzzled to understand what motive should prompt such advice from she and King. We have just had a conversation with Mr. Nunn, and he agrees perfectly with Grimm and Dadant, and all *careful* observers, viz: that none but *three banded* bees are to be found in Italy, although many of them are quite dark—the bands being more of a leather color, than yellow.

We can almost forgive Professor Tyndall, if he did blunder on the way bees build comb—see *Popular Science Monthly* for Oct. 1874—when we read the following beautiful sentiment copied from *Christian Union* of Nov. 25th, '74:

He had been making some beautiful experiments, showing the structural power of molecular forces, when he referred, parenthetically, to the revelations of science as calculated to awaken our surprise. "We are surrounded," he said, "by wonders and mysteries everywhere. I have sometimes—not sometimes, but often—in the springtime watched the advance of the sprouting leaves, and of the grass, and of the flowers, and observed the general joy of opening life in nature and I have asked myself this question, 'Can it be that there is no being or thing in nature that knows more about these things than I do? Do I in my ignorance represent the highest knowledge of these things existing in this universe?' Ladies and gentlemen, the man who puts that question fairly to himself, if he be not a shallow man, if he be a man capable of being penetrated by profound thought, will never answer the question by professing that creed of atheism which has been so lightly attributed to me." Appreciative cheers followed this happy and presmably sincere rejoinder to those who see in Tyndall nothing but enmity toward God.

It would be sad indeed to think that no being in the universe knew more of the hidden mysteries connected with bee culture than our own "awkward selves."

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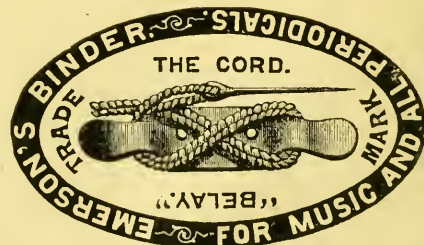
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CATNIP SEED for sale at 25c per oz. Address A. A. RICE, Seville, Medina Co., O. 111f



You cannot look over the back No's of GLEANINGS or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—perhaps only mentally—"Confound it I *must* have last month's Journal and it's no where to be found." Put each No. in the Emerson Binder as soon as it comes and you can sit down happy, any time you wish to find any thing you may have previously seen even though it were months ago.

Binders for GLEANINGS (will hold them for four years) gilt lettered, free by mail for 50, 60, and 75c, according to quality. For table of prices of Binders for any Periodical, see Oct. No. Send in your orders.

A. I. ROOT & CO., Medina, O.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

JANUARY, 1, 1875.

No. I.

OUR OWN APIARY.

A bright and "Happy New Year" to all old friends, whom we may be so fortunate as to greet once more through these pages. As we write this 3rd day of Dec., 1874, we of course can not tell how many of our friends of '73 and '74, may have concluded to "go with us" through 1875. However, be the number great or small, we once more wish you a happy and prosperous year with your bees, and hope we may be so fortunate as to succeed in assisting in the matter.

In Vol. 1, we tried to tell you "How to Start an Apiary," in Vol. 2, "How to Conduct an Apiary," and we fear we are now better qualified to tell you what we are doing in Our Own Apiary, than any thing else, and so we commence the task without further apology.

In our last, we informed you that we had raised the sash in our greenhouse nearly level; well, editorial duties compelled us to neglect it entirely while we were getting out our Dec. No. and new price list, and meanwhile we had some wintry weather so severe, that all *unsealed* brood in all the hives in greenhouse was destroyed. This would not have happened had not the sash been left so that the interior was very much exposed. The larvæ in the lamp nursery shared the same fate, although the temperature at no time fell below 60°, but they had so few bees that the heat of the lamp was their only safety. From this we should judge the vitality of brood and eggs is destroyed by exposure to a temperature of 60° for any length of time. This accords with our experiments in sending eggs by mail. It can only succeed during the hottest part of the summer, and even then small larvæ among sealed brood seems to give best results; the sealed brood retaining considerable animal heat.

The weather has now moderated again, but still too many bees are found dead on the floor and clinging to the sash. To test another "bright conception" we have to-day arranged each hive so that the bees have an entrance *outside* the house as well as *inside*. Will they learn to locate the two entrances think you, so as to make no blunders? We'll tell you after the next pleasant day.

Dec. 8th—It don't work, and after we tell you why, very likely you will think as we do, that we were stupid not to have foreseen the difficulty. As soon as the sun had warmed the interior, the hives "drew" like stoves, that is they drew in the cool out-door air, and sent a strong draft out of the entrance of each hive into the greenhouse. This draft kept the bees

so cool they wouldn't fly at all, and even should the air be quite warm outside, we think such a current through the hive, of questionable utility unless forsooth it be used in hot weather for a "patent ventilator;" if hives are shaded from the sun, we doubt much whether a draft through the hive is ever desirable, no matter how hot may be the weather. As you may have inferred, our experiments are now tending toward the feasibility of a greenhouse, or similar structure, that will enable us to locate our bees permanently, the year round; that is, have them so situated that they can go out in the spring at pleasure, when the weather permits, or gather meal for their brood and take the needed exercise in the bright sunshine inside, where wind and frost are entirely excluded. If it is among the possibilities we should want such a structure to be so made that little if any engineering would be required; such as sliding sash, shutters etc. To convey our meaning we append a precious (to us) little note just at hand.

Apologos, a neighbor told me of an experiment he tried a few years ago, that somebody might test. He had two weak late swarms that he expected to lose any how, and as P. G. says "just for the fun of it," put them over the family room, in a tightly plastered room with the stove pipe running up through the floor into the chimney. They were put 4 feet back from the window, and on a level with the sill, with a board for a bridge from the window to each hive. The children's beds occupied the same room. The result was they flew whenever they wanted to on the window and all over the chamber. They soon got used to it and as they were few in numbers and scant in stores, he fed them all winter daily with honey and rye meal, in little troughs placed on the sill. They would come and work on it every day when warm enough and go home with it, industriously traveling back and forth on their respective bridges; each returning to their own hive, however much they might get mixed up at the troughs. They came through all right. They were in box hives and the only trouble was, he had to mix the honey and meal as he fed it, in small quantities or it would sour. They soon learned to come home if they couldn't get out of the window; although the children slept in the chamber they did not bother each other at all. Noises did not disturb them nor did they soil the chamber badly.

H. HUDSON, Douglas, Allegan Co., Mich.

There! do you see how near this man came to a perfect accomplishment of all we can desire. Had he found that by opening the window when the weather became suitable (which he may have done, we have written for further particulars,) the bees returned all right, why could he not have left them thus all summer? Many experiments will be needed before we are ready to arrange an apiary in this way, and to properly economize labor both for the apiarist and the bees, it seems to us is to be the grand problem at the present stage of Apiculture. Since we now know that

bees will work and rear brood in a glass enclosure, we think we may safely call it

PROBLEM NO. 27.

We invite suggestions, and the result of experiments from all. The difficulty mentioned, of a draft through the hive, is easily remedied by placing the hive a few inches from, and with the entrance facing the wall of the structure. An opening in the wall, before each hive, permits them to go out in suitable weather, and when gathering honey they can readily alight as near the entrance as they do ordinarily with a Langstroth portico. As the interior of this building is expected to be kept above the freezing point, without any artificial heat, at all seasons of the year, these entrance holes should be closed whenever the bees have no need of them. To do this quickly a single lever can be so arranged as to close 50 or 100 at once and with but little effort. We would have the entrances to the hives nearly on a level with the ground outside, for reasons repeatedly given, and as the extractor is to be used on the inside, our building need be only wide enough, to permit a car on the Blakeslee plan, to run between the rows of hives that are up and down each side of the building. If the roof is of glass the air inside will permit the bees to work almost any day in winter when the sun shines, but what is to be done when the sun doesn't shine in winter, and also to avoid the excessive heat, and to shade the hives in summer? This is one of the most important points in the problem, especially as we want it done without laborious manipulations whenever we have sudden and extreme changes of weather. Peter Henderson (*Am. Agriculturist* for June 1873) has happily solved the most difficult part, by recommending that green houses have spacious cellars beneath them, and that the floor above be laid with the boards slightly apart, permitting the air to mix freely. That in the cellar, will equalize the temperature of that in the greenhouse so as to prevent its becoming unpleasantly warm in summer, and will also prevent its ever going lower than freezing in winter, if shutters are used during the most severe weather, for the natural temperature of the earth is about 40°. As strong stocks bear a freezing temperature for a short time without injury, we think bee-keepers might dispense with the shutters, were it not for shading the house in summer. This last item bothers us most of all, but we feel pretty sure it is not necessary and perhaps not advisable, to have the roof all glass; if one half were shingles we think we should have all the heat and light needed. Again, bees work better with a level ceiling of glass above them, and as this will not shed rain, we shall need two sashes. In that case the dead air space between the two will be of great service in keeping out frost. To those who are inclined to think this is going to a great amount of fuss and expense for so little, we reply, that it is all to enable us to have plenty of bees, and to have them early, and most of our readers are well aware that if we can secure this, independently of the weather, reward is easily secured. If it pays Market gardeners to have green houses, and to keep them also warmed for months artificially, will it not pay us, especially as a hive of bees will endure variations

of temperature safely that would be at once fatal to vegetable life.

Our best colony in the greenhouse, and it is one that would not winter ordinarily, is now rearing brood quite briskly, and yet it is near the middle of Dec. Won't a greenhouse pay in the spring think you?

We are very much interested in your *forcing house*, we do not admire your calling it greenhouse, for we do not think there will be any thing *green* in it, when you succeed so admirably.

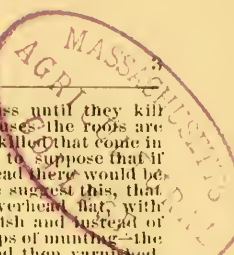
B. H. STARK & Co., Cleveland, O. Dec. 8th, 1874.

We beg pardon but there *is* something "green" in it; viz: three geraniums, one budded almost ready to blossom, and a hyacinth, just peeping out of the ground. Since you have mentioned it we think we will call it a "forcing house" and thank you for the correction.

Meal placed inside of the lamp nursery does no good, the Queen lays eggs daily and some of them are hatched into minute larvæ, but they get no farther. Although the rest are busy on the meal within a few feet of them they pay no attention to it whatever. Very likely a pint or so of bees, added to their one teacupful, might start brood but we want to find out why *they* can't do it; they are kept warm, have plenty of food, water and all essentials so far as we know. Not only is pollen essential to the life of the larvæ, but it needs a pretty large amount daily, as we have ample means of seeing, for if several cold cloudy days occur and we do not warm up the room by the stove, the larvæ is sure to perish. None of our attempts to get them to use meal in the hive, either dry or wet up with syrup or honey, have been of the least avail.

Dec. 10th—Have put five more weak colonies in the forcing house; as these have not had a fly for a week or two, we were agreeably surprised to see them hover before the hives, before flying against the glass as did those put in first, and the consequence is, they nearly all regain their hives without any confusion. As we can now set them at work any day by starting a fire in the stove, we propose to keep these nine colonies (including the nucleus) rearing brood until spring, or at least until all are strong.

Dec. 21st—But this don't work just as we proposed either. It seems that bees get "lazy," if they can't fly out in the open air. We were half inclined to think this the case many times, but concluded it was the cool weather that prevented them working on the syrup as they did in Oct. When we first put the three small stocks in the forcing house, they covered a universal feeder so as to look like a small swarm hanging to the strip of wood, and they took away half a coffee-pot full of syrup in a day, during favorable weather. By the way we believe we have not mentioned that bees do not drown in their feeders even if left uncovered, for they will walk down the cloth sides, which gives them a secure foot hold, and load up with the greatest apparent satisfaction. Well after they got the combs pretty well filled, they seemed to have lost their enthusiasm, and although hives just brought in, seem to have all their natural disposition for robbing it soon gives way to a kind of listless disregard of the amount of honey or syrup that may be left exposed about the interior; warning the



room by artificial heat does not seem to restore their passion for the accumulation of stores. Do not understand us however to say they do not fly, for they go all over the room and regain their hives with very little loss, and the combs, bees, and all seems bright and healthy. Only one colony is now rearing brood, and they only work sufficiently to gather meal daily for the nourishment of the brood. In the morning as soon as the room becomes warm enough, they work quite briskly but gradually cease, and by one or two, P. M., have nearly all ceased; by the next morning this supply is nearly all used up. This colony will take no notice of honey, or syrup, but some of the hives just brought in carry it in to some extent. It seems quite certain that *weak colonies* can be wintered with such an arrangement that could not be wintered otherwise. Our "teacupful" nucleus, are as healthy as can be desired, and go out and fly in the sunshine, and back again as safely as if in the open air, yet they *won't* rear brood. When the weather becomes warm in the spring they can be allowed to go out, and will doubtless then commence brood rearing without trouble. On the 19th, it was warm enough for an hour or so to allow flying out, and we opened the doors. Their first movement after taking their points was to fly off in a strait line so far that it seemed they never could come back, but we believe all returned in 10 or 15 minutes, and they then sought their respective corners with buzz that seemed to say "there! a fly of four or five miles, does a body good."

Even if we do not succeed much with brood rearing until the weather permits them to have occasionally a day out of doors, we think we have no cause to feel disheartened. The forcing house will prove a most excellent place to give the out door colonies meal, and perhaps sugar too, for they learned to go out and in as safely as need be while we were making repairs.

We are very glad to be able to give the two following letters from practical Florists; they show somewhat the difficulties with which we have to contend, but we think need not be considered discouraging.

I have been watching with interest your greenhouse operations. I tried the same six or seven years ago but failed. I thought of course, being a Florist by profession, I would encounter but few difficulties but I soon found out in this as in some other things it "was not all gold that glitters." I put a very large swarm into my greenhouse which is 60 feet long. When the sun shone brightly the bees would rush out in great numbers, tire themselves against the glass, fall down amongst the plants and die. I lost them all before spring. I have no doubt but the cold frame will answer the purpose as stated by Mr. Bidwell. I have put a few in one of my cold frames and will give them a fly a few times, and I think they will be all right in the spring. But here let me caution bee-keepers who are now trying and will try, this method of wintering. It is not every one that can run a greenhouse or even a cold frame; this is a business by itself and there are some things about it that cannot be taught, but by dear bought experience.

GEO. THOMPSON, Geneva, Kane Co., Ills. Dec. 12, '74.

Mr. ROOT, Dear Sir:—Your interesting little paper rec'd. and postal card saying probably I could be of assistance to you, but you did not say in what way, you said "see GLEANINGS" so I looked but could see nothing except it was in the matter of greenhouse. If I could I should be very happy to do so—a few suggestions though if they do come from one that don't know anything bees—might not be amiss. In a store in our little city, the prop'r keeps a collection of flowers in the window and in spring the bees come in pretty thick and I never knew of one to go out alive;

they always bump against the glass until they kill themselves. Now in my greenhouses—the roofs are very low and very few bees get killed that come in consequently it would be natural to suppose that if the glass was perfectly level overhead there would be little if any loss. I would therefore suggest this, that the roof of the room be sealed overhead flat, with glass, the glass *not* to lap as in a sash and instead of using sash, for the ceiling use strips of muntins—the muntins to be painted two coats and then varnished, this will make it very glossy and smooth as the glass and a bee can't stick good on the underside of a level piece of glass nor on the smooth varnished munting. Then I would have the side walls whitewashed perfectly white which will reflect the heat and make the apartment more cheerful for the bees, and the light will be so evenly distributed about the apartment that I doubt if any will fly upwards, even if they do they can't stick. Another thing, I wouldn't use a coal stove to heat with, it *will* give off gas in spite of all you can do, it will kill plants and surely where plants can't live it isn't healthy for bees. The top sash of your house should be made movable so you can lift them off in early spring as soon as the bees can fly and you can make them pay for themselves any year by raising a few early tomato plants or starting some suitable plants for pasturage. Lift one or two catnip plants in the fall (or now) and pot them; set in your greenhouse and when they blossom the bees will feel at home—seems to me I could almost do it myself, (conceded! you say?)

If I have made *one* suggestion here that has assisted you I have done a *little*, yet I have taken the liberty to say a great deal for one that "don't know a honey bee from a *yellow jacket*."

W. T. ALAN.

P. S.—How can I tell in winter if a hive is well stock-ed, (count the bees in a warm room?) I may start out some day and buy a hive and I want to get a good one when I do.

Crescent Hill Gardens, Greenville, Pa. Dec. 15th, '74.

Very many thanks friends Thompson and Alan. You do not know how acceptable these letters have been. We will take up some catnip plants this very day if the ground softens sufficiently. We have only wood in our stove, but yet fear, that the heat given off isn't just the thing. As the temperature never goes below 40° even with no artificial heat we think perhaps it will be as well to wait until Feb. or March, before attempting to force them much. If we were going to buy a swarm of bees friend A., we should remove the tops of the hive, or turn it over so that we could see the combs, whatever the weather was. If the colony is good, bees should be seen between 5 or 6 ranges of comb, depending somewhat on the weather; when very cold the cluster is more densely packed and consequently smaller.

Supposing you put a curtain, beneath the glass in your "greenhouse," horizontally, made of some cheap kind of netting, mosquito bay or something of the kind, made just so bees can't get through it, will it not be an advantage?

W. A. MICHENER, Low Banks, Monck Co., Ont., Can.

We used a curtain of thin white cotton cloth thus, in our earlier experiments, and could see no advantage further than to obstruct the direct heat of the sun and thus cool off the apartment, in fact the bees seemed to cluster on the cloth more readily than on the glass, and they would hang there all night. With the glass horizontally, they never try to cluster on it, but attach themselves to the sash. We think friend Alan's plan just about what is wanted. We at one time had concluded the nearer the hives were to the glass the better, and accordingly have them now on a shelf within a foot or two of the sash, one is even raised up within a few inches. Our Quinby hive on the contrary, in account of its size, was placed on the ground away from the sash, and the lamp nucleus is back under the north roof; still these latter regain their hives just as well as any.

CONVENTIONS, LECTURES ETC.

WILL THEY PAY?

WITHOUT doubt much that was valuable was brought forth by the N. A. B. Convention, a report of which is to be found in the Dec. No. of the *B. K. M.*, and while we have no wish to detract any thing from its merits, or to intimate that it was in any way inferior to large conventions generally, we would direct the attention of practical Bee-Keepers to a few points discussed. Adulteration of Honey is certainly a great, but we cannot think a growing evil. The remedy is like that on all other articles of merchandise, let proprietors of canning establishments and dealers, *purchase* only from parties of known integrity. This is daily becoming more a necessity in all branches of trade, not only to the consumer, but to the jobbers. To succeed in any business a reputation must be acquired, that is easily lost, but only gained by real, honest effort. Show up the dealers in artificial honey, butter, or adulterated goods of any kind by all means, and without mercy, but don't for a minute think of waiting until "Paradise is restored" to have the thing set right. To judge by the reports, Mr. King was all through the convention hand in hand, with our old friend (and sinner) Benedict, who advertises and sells Queens reared on Kelley's Island and yet does nothing of the sort. This same Benedict is on a committee with Mr. King and Mrs. Tupper, to decide about Diplomas for Queen rearers. As they are to decide by the "looks" of the Queens and bees only, we really hope Mr. King will be able to tell, in this manner, which friend Benedict rears on the Island and which he does not, since his (Benedict's) word is good for nothing in the matter. How about the "Paradise" matter? Have Mr. King and Mrs. Tupper no fear that they may get so "mixed up" in bad company as to by some mistake get taken along with them.

Dr. Rush had a secret to sell, viz: *one teaspoonful of flavoring Extract of Lemon to one gallon of honey* to prevent candying. This receipt cost him \$30.00. Has not every one of our readers at some time or other sufficiently seen the folly of receipt selling, that we may pass the matter without comment, unless it be to advise putting all in together with the Bee Sting remedies?

In regard to "Bidwell's" method of wintering, our Benedict seems to have solved the whole problem by declaring that the diseased hives may have a frame covered with musquito bar placed over the combs, that when the whole is carried into a warm room, they may fly and void their faces, *on the combs*. When hives have to be thus lugged about in the winter or spring, and the bees compelled to exist in this filthy and unnatural manner, who would not beg to retire from the business in disgust. If Benedict did this way when on the Island *twelve miles from shore* (it is only *four*) is it any wonder that *foul brood*, got such a hold there that it cannot be eradicated.

If it were not for finding so much fault, we should also mention that this trio, Mr. King, Mrs. Tupper and Benedict, decided that Imported Queens of late were a failure. Whatever may have been the case with their impor-

tations (the latter probably referred to the "Italy of America") we do know that those brought by Adam Grimm, by Langstroth, and recently by Nunn Bro's,—as *honey gatherers*—were very much superior to our common stock of *yellow Italian Queens*. Also, if any one of our readers purchased one of the Nunn Bro's, whose workers showed less than three yellow bands, and whose "grand children" showed *none* under any circumstances, we should be pleased to hear from them. Whatever others may have done, the Queens furnished by Grimm and Nunn, at least, were pure and well worth the expense, and diploma or no diploma the "dollar" Queens sent out from our County hereafter, will be all or nearly all reared from *genuine Imported Mothers*. We shall be sure also that they are imported.

Now in regard to National Conventions and expensive Lectures: In the Dec. No. of *Am. Agriculturist*, Walks and Talks on the Farm writes: "If we could get at agricultural facts by holding conventions, making reports, and passing resolutions, we should soon place agriculture on a scientific basis." Again, *Daily Rural Life* says in *Rural New Yorker* of Dec. 5,

Of late, I have read a little but seen a great deal in my agricultural papers about

FARMERS' CONVENTIONS

held in various Western States, and at which there has been much speech-making and stupendous resolves made to do great things. Perhaps the time and money spent at these gatherings could not be put to better use; but when reading the reports of the same, I cannot help thinking of my old neighbor who got up every morning with a good resolution to do something the *next* day, which of course never came.

Now is not this too much the case in Bee Culture? Grimm, Harbison, Capt. Hetherington, and our greatest honey producers, in general, seldom attend conventions; perhaps because they would be crowded into the back ground by "resolutions" etc., if we may be pardoned for the suggestion.

Suppose we wanted to know just how Harbison secured his great crop. Which would be best for all parties; to have him come to some convention and give an address, or to have some Journal pay him for his time for making out a careful report of his seasons operations? Which would be worth most to bee-keepers, to have his address, or to have a printed copy to read over during the season, as the successive points came up? Above all, which would be least expensive to a host of *novices* who usually have but little money to waste?

The matter of engaging lecturers at a considerable expense comes right in here. It certainly is a pleasure to see and listen to the persons themselves. We might have decided to pay \$5, or even \$10 to hear Dickens read, what we had often read before; but will this sort of thing pay in the present stage of Bee Culture? How many have we who are competent to undertake the task? If there were a single man, or woman either, in America, who could tell us how to take our colonies through the winter as safely as we do through the summer months, we should say send him along by all means; until such a one is found, had we not better wait awhile?

When it was intimated that Mr. Clarke himself was open to such an engagement, it occurred to us as questionable whether one who could make such an "ado" about a single bee

sting (see pages 70, 71 and 93, of *A. B. J.*, Vol. 9.) was fitted for a lecture on Bee-Keeping at all. We have a high respect for Mr. Clarke's talents and worth, but has he had sufficient *practical* experience among the bees themselves?

Many of our readers are familiar with the blunder Agassiz made when he attempted to tell how bees made comb, (see Vol. 1, page 43, GLEANINGS) and it seems that our world renowned Tyndall, who not only attempts to divine from where we came, but where we are tending, has recently tried *his* hand at "comb making." He, wisely admits that bees do not stand *inside* the cells to work, but makes almost as bad a blunder, in saying: "The bees place them selves at equal distances apart upon the wax, sweep and excavate—" etc. Now if Tyndall is teaching us other things in the same way, i. e., delivering lectures on some subject on which he knows nothing, how much can we depend on any thing he says. Oh why could not he and Agassiz, before attempting to explain the matter to the people, take the time to get a hive of real live bees, as did Darwin, and not be obliged to take any thing at second hand. If they *two* were afraid of stings, any expert honey raiser could afford them the facilities for a safe observation and thus prevent their going into such folly, or falsehood to call things by their right names, for they pretended to have knowledge where they had none. *Take the money and buy a hive of bees* all ye that that thirst for knowledge, and take it direct from God's own works, instead of receiving it second hand.

For particulars in regard to the North Pole, or as to whether the planet Jupiter is inhabitable, we may be obliged to listen to those who know better than we do, but in our own industry no such necessity exists, for a swarm of bees is within the reach of all.

INTRODUCING QUEENS.

A STORY WITH A MORAL.

FRIEND "NOVICE":—I don't know as there is anything for me to write about, and yet in spite of our short acquaintance, I feel like indulging in a little gossip with you. You seem to be quite amiable when tormented by inquisitive people, so I thought I would question you a little. Practically I am a "green horn" at the bee business, and yet I have been reading bee literature for a dozen years, but was not situated until now, so that I could handle bees. Last June I bought a swarm of black bees from a box hive, living these in an "American." They went to work with a good will building nice straight combs, and not seeming to mind my inquisitiveness for I had them open and the frames out nearly every day, yet they were soon strong in bees and honey. My neighbor Mr. Spear, in July rec'd a nice Italian Queen from Theo. G. McGaw, and as he has only one hand to work with, asked me to assist him in introducing. His hive was an "American" and the colony had been queenless since the 20th of June, the date on which it sent out a swarm. We caged her royal highness in the hive for twenty four hours, then took out frames till we came to the brood nest, and I held the mouth of the cage as I thought close enough to the comb, but when she came out instead of going on the comb she flew into the air. Well we felt pretty blue, but concluded to call this lesson No. 1. and after some delay during which the frames stood around "promiscuously," we closed the hive and wrote to friend Theodore for another Queen, which came the following day. When all was ready we tried it again, and this time you may rest assured she went on the combs. The bees received her well, fed her, and she deposited eggs, but in about one hour we had a Royal corpse lying in front of the hive. This was lesson No. 2, and "we boys" were not ready to "recite" either.

Well, a consultation was held, the result of which

was, we sent immediately for two more Queens. They were not furnished for some ten days, but on July 30th they made their appearance, and with a determination to succeed, or *break a trace*, we went for that hive. And—well we could "spell" in lesson No. 2, for there was a quantity of brood in all stages. The teaching of the lesson is, never put a Queen into a hive taking it for granted there is no Queen already there, but *know* there is none. We opened another hive and succeeded in introducing her Majesty without difficulty, but the strange part of the story is to come. In due time handsome Italians made their appearance in the first hive, increasing in numbers rapidly, and the conclusion we came to was that when the first Queen escaped she settled on one of the combs which was setting outside, and was returned to the hive with the frame. One day about the middle of Sept., Mr. Spear told me the hive was producing *black* bees. We made an examination of the hive and found a fine large black Queen in possession of the premises and she still continues to usurp authority. Now this was after all swarming was over, there being no honey to gather, and after racking my brains, and trying to look and talk "wise," I confess I can't tell where the Italian Queen went to, and where the black one came from, can you?

The fourth Queen I undertook to introduce into my own hive, after caging her in it for over forty eight hours, but the bees hugged her and Mr. Spear reached in and took her out with a handful of bees but before we could get her separated from them, one vicious imp gave her a sting. I sent for another, leaving the hive queenless. It did not come for over a week, and in the mean time I fed the bees eight lbs. of sugar syrup, slowly to imitate natural honey gathering and they received her gladly, and are now as pretty a colony of Italians as I ever saw. The lesson learned here was, that it was not safe for a greenhorn to undertake to introduce a Queen when there was no honey gathering.

This yarn has spun out pretty long, but you had better not get discouraged, for I have a lot more *stuff* I want to tell you and will in all probability trouble you again. W. O. ATKINSON.

P. S.—I have several hives now and if I have sense enough to care for them expect to have many more. Vermont, Ills. Dec. 6th, 1874.

If you continue to reason and practice as cogently as above we think you soon will have if you have not already, "sense enough." We earnestly commend the "lessons," not only to *novices*, but to veterans as well. You were certainly inexperienced or you would have watched for the Italian Queen to return instead of giving up. Whenever a Queen takes wing without the bees, keep still and await her return. She will almost invariably soon return to the very spot where she left. Without a doubt some weak colony starved out in Aug., effected an entrance into the hive and in the combat, the Italian Queen came out vanquished. This has many times happened.

PROBLEM NO. 28.

IS swarming a natural impulse and does it affect bees in June and July independent of condition? I want the opinion of your correspondents on this question. GEO. THOMPSON, Geneva, Ills.

Our opinion is that food, proper temperature, etc., will induce the swarming fever at any season, although we cannot prove it by experiment as yet.

ANSWER TO PROBLEM 26.

[This Problem was numbered 25 by mistake on page 193 last No.]

In conducting a series of experiments in wintering bees two years ago this winter, I deprived one swarm entirely of pollen giving them perfectly dry combs. The bees were wintered successfully but reared no brood until I gave them combs with pollen when they began immediately to fill the combs with brood. They were without pollen in all about three and one half months. M. E. McMASTERS, Shelbyville, Mo.

SOLUTION OF PROBLEM NO. 25.

I am a great hand to experiment—I have sacrificed many colonies of bees in that way. Many a bee,

drone and Queen have I dissected for my microscope; but at last concluded it would not pay and had almost decided not to experiment more. But when your Problem No. 25 came out I thought I would try to solve it for my satisfaction, and as the result may be of some benefit I give it to you below:

I made two artificial swarms by the driving process and placed them in a room arranged for the purpose; gave them nothing but water for three days so I would be certain they would have used all the honey taken during swarming. Before feeding cut out all the combs they had made—Fed No. 1 with one lb. brown sugar made into syrup and No. 2 with one lb. white sugar also made into syrup. No. 1 gave 81 square inches of comb and No. 2, 30 square inches—Reversed the feeding and No. 1 gave 36 inches and No. 2, 72 inches—Fed both with 1 lb. honey and got from No. 1, 25 inches and from No. 2, 20 inches—No. 1, had 5½ lb. bees and No. 2, 5½ lbs. You will judge and see by the above which gives the most wax. The 25 inches of comb weighed 1 ounce and its average thickness 1½ inch. Judging from that it would take 16 lbs. of honey to make 1 lb. of wax. The 81 inches comb weighed 2 1-16 ounces. No pollen given in any shape. During the feeding process the Queen laid but a few eggs and when I took the combs out all those hatched seemed to be dead. [Just as they always do without pollen.—Ed.]

I was myself astonished that the brown sugar should have given more than the white, but after reversing the feeding I was convinced. My opinion is that the molasses contained in brown sugar has something to do with it; am I right? This would be an interesting question to solve and would be of great benefit and economy for feeding bees should it prove as good as sugar, as molasses is cheaper, would not crystalize, and would not require the manipulation that sugar does. But I am afraid that molasses would cause dysentery, judging from some one's report I saw. I don't remember exactly where; though my bees feed around sugar houses here for three months of the year—I am surrounded by sugar houses and I never saw the disease.

After obtaining the result sent you I put the bees back into their previous hives.

PAUL VIALLOX, Bayou Goula, La. Nov. 27th, 1874.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, JAN. 1, 1875.

STICKS B, D, in the honey box, are just 5½ inches long. We forgot to say so in the proper place.

A. B. J. for Dec., was on hand in good time; Magazine on the 14th, and World on the 18th. Those who take all three, will have "Reports of the Convention" "right smart."

DR. J. P. H. BROWN, of Augusta, Ga., sends us one of the neatest and most explicit circulars in regard to Queens, bees and implements, we have yet seen. Without doubt his locality gives him a great advantage for Queen rearing.

EDITORS of the *Bee World* have given us better rates than at first, which enables us to club with them at same rates of A. B. J.; see club rates. All those who have sent us \$2.00 for both, or \$5.00 for all, can have the 35c back if they will notify us. All the Bee Journals now for \$4.50 post-paid.

IN the absence of P. G. on account of sickness, the whole of the Editorial work of this No. has devolved on Novice. If he has now and then mixed his *tenses*, or

"gone heavy," against something or other, we hope you will excuse it, hoping with us, that she may soon be able to *preside* again as usual.

IN our recent price list we omitted to mention the very convenient implement in the Apiary, the Wax Extractor, price \$3.00. For description see Apr. No. of Vol. 2. Also Bee veils for the timid ones, price 75c, the only protection we can recommend. Gloves and mittens of any kind are worse than useless.

WHAT does possess our exchanges that induces them to keep publishing such nonsense as the little item now going the rounds, entitled "Pruning Broods," and credited to the *British Bee Journal*. If any such Journal exists, will some one be so kind as to send us a copy, or an advertisement of it. Bee Culture is not Greek or Latin, and if papers wanting matter of that kind would get it from some practical Apiarist in their own vicinity they would stand a much less chance of being considered fossils of a bye-gone age.

WE have procured some Glucose for examination. It is as thick as honey, but is not near as sweet; imagine a thick solution of gum-arabic, with sweetish taste and a flavor a little like sugar cane, and you have it. Mixed with honey it would undoubtedly pass very well in cities. We are told a Chicago honey dealer—we don't know which one—has purchased 27000 lbs., at a cost of about 4c per lb. Those who know all about it evidently propose to let him get it all retailed out. There certainly can be no trouble in getting pure honey nowadays if any one is very anxious to have it.

WHY, NOVICE, what an agreeable surprise you gave us, to be sure, with the "Present!" I never dreamed of so good a present. It is the *very best* one you could have sent. A thousand thanks.

W. M. KELLOGG, Oneida, Knox Co., Ills.

We are very glad indeed to hear that our little "present" has pleased so many. As Jan. 1st is passed, we will hereafter send it on the same terms as the Lithograph viz: to any one sending us one name besides their own, leaving you to choose which you prefer, or it will be sent to all who subscribe for 1876, during the present year.

WERE Conventions all as productive of good as those held in York State and Michigan, we might be induced to change our views in regard to their utility. We are under obligations to Secretary Burch for proceedings of the latter given in the *Kalamazoo Telegraph* of Dec. 17th, and 18th. The whole would well merit a place in our Journal, but we have only room for a few comments. Did they not overlook the great good that would accrue by having the number of sizes of frames reduced to, say about five instead of five hundred or more, as is the case at present, even should we be obliged to admit one universal standard, an impossibility? In other words decide definitely just the outside dimensions of a Langstroth, Quimby, American, Gallup and Adair. If our attempts in this direction are not correct, set us right before we go farther.

Feeding to Stimulate brood rearing: quite contradictory statements were made in this matter, some of them so nearly approaching harshness (although we hope not so intended) that on this as well as some other matters, we feel like advising the combatants to drop the matter until they can experiment, some warm spell when no honey is coming in.

Although the meeting comprised a large number of our keenest intellects as well as successful Apiarists, their opinions remind us much of a pile of valuable letters on our table. Large, and small hives; perfectly closed, and well ventilated honey boards; deep and

shallow frames; keeping bees warm, and keeping them cold; outdoor and indoor wintering; horizontal and two-story hives, etc., etc., are all most ably defended, and then in the next as stoutly denounced. These letters, nearly all of them, richly merit a place in these pages. What shall we do? Will it not be as well to advise you to go home and go to work, each on his "own pet principle?" when you can secure such crops as Harbison, Grimm, Hetherington, and his neighbors, we will publish your letters with pleasure. In the meantime we know you will excuse us for making you give place to the following letters. Wont you?

FROM "KATIE GRIMM."

DEAR Mr. Editor of "GLEANINGS":—The object of my addressing these lines is to inform you that my sister, Maggie and I, have become bee-keepers on our own account. Perhaps it has been known to you before that neither my sister nor I live with our dear papa in Jefferson, anymore. It was in the year 1874 that we both came to Green Bay to start a new home with our kind husbands.

After expressing our desire to try bee-keeping, father sent us, in the month of May, 1874, 17 colonies, which arrived here safely, and we found them all in a fair condition. We placed them in their permanent locations in the rear part of the lots on which our dwelling houses are situated, which we found to be much more convenient than to keep them away from home, since we both attend to our household affairs without any help.

We feel happy to tell you that our husbands were well pleased with our new undertaking, and helped us all they could when their business would allow it. We did not intend to increase our bees to more than 25 colonies, so we examined them all closely each week and disturbed the queen cells of those which we did not consider too strong for one colony. We put boxes on some of them, and others we worked with the extractor. Our expectations were indeed very small, since other bee-keepers here had very poor success for a number of years, but now please hear of our result.

We extracted 600 pounds of nice white honey, and took 300 pounds more in caps. Extracted honey sold for 20 to 25 cents per pound, and cap honey for 25 cents per pound, gross; in short, the honey we sold came to \$190, and we have enough left for our own use. Our expenses were only \$30, as our father was kind enough to send us the hives, boxes and double hives for the whole season. It left us \$160, or \$80 for each. We feel greatly encouraged with such a success, and intend to increase our stocks as much as we safely can another year.

Our bees winter well so far. They are quietly enjoying their winter sleep, and we are all anxiously waiting for the warm sun of spring, when we can hear our little bees humming around us again.

MRS. H. GIESELER, *nee* KATIE GRIMM.

Green Bay, Wis., Dec. 22d, 1874.

REPORT FROM CAPT. HETHERINGTON

MESSRS. A. I. ROOT & CO.:—Your letter asking for a report of my present seasons' honey crop duly received. I take pleasure in complying with your request. A part of my bees are managed by others. Total amount of honey made by bees managed by myself, box, 19,907 lbs., extracted, 3,150. This was from 224 stocks in the spring, increased to 570 in the fall. Total from stocks managed by others, 427 in the spring, increased to 677 stocks in the fall; box 22,701, extracted 14,717; making in all, from 661 stocks in the spring increased by fall to 1,047, total box honey 42,608 lbs., total extracted 14,867 lbs., grand total 57,475 lbs. I now have in winter quarters 1,172 stocks, in good condition. We have added to our number this fall by purchase. We use the Quinby hive mostly, the few that are not are made of straw, made so as to box conveniently. J. E. HETHERINGTON.

Cherry Valley, N. Y., Dec. 18th, 1874.

REPORT FROM P. H. ELWOOD.

ALSO SOMETHING ABOUT METAL CORNERS, & Q. HIVES.

FRIEND NOVICE:—We commenced the season of 1874 with 175 colonies. One-half were in fair condition, the remainder were weak. Nearly 20 lost their queens before the 1st of June. The spring was so severe, the 1st of May being one of stormy winter, that we put 10 of our weakest swarms into lamp nurseries. Although successful in rearing brood

in these, we have since concluded that there is a better and easier way. We are not converts to the cold-frame system for winter, and think bees should be kept perfectly quiet during cold weather, and that stimulating for brood rearing should not commence until settled warm weather in the spring, when a whole hive full of brood may be reared at a less cost of bees, than a few square inches earlier in the season. And the direct rays of the sun, we think, may be so used as to furnish all the stimulating necessary. A year ago last spring I bought a fine lot of bees that had been buried in the ground six months. A month later they were as strong as when set out, because the weather being warm, they were able to care for a large amount of brood, and for every old bee used up a young one was ready to take its place. Problem: How fast do colonies increase in strength, when for every bee reared two others lay down their lives?

The fore part of the season was very wet and there was very little white clover honey gathered. Basswood yielded well, but with considerable bad weather. Buckwheat was a failure, so our surplus was nearly all basswood. Our strong swarms gave about 100 lbs. when boxed, or 200 lbs. if extracted. The following figures show quality and price at railroad station:

4,929 lbs. white, 2 comb box at 28c. gross,	\$1,277.00
2,230 " mixed, " 20c. "	446.00
9,900 " extracted, " 15c. "	148.50

Total 17,050.

\$1872.10

Some of the extracted was sold at home.

The total would have figured up at least 500 lbs. more before feeding to fill up piece boxes. We have put up during the last three years over four tons of extracted honey in glass fruit jars, and when sealed up at a temperature of from 140° to 150° have had no complaints of candying. There is no excuse for doctoring honey to prevent granulation and such a proposition ought not to have been entertained by a national convention of bee-keepers. (Continued Next Month.)

CALIFORNIA.

LETTER FROM J. S. HARBISON, TO
G. F. MERRIAM, TOPEKA, KAN.

New Castle, Pa. Nov. 28th, 1874.

DEAR SIR:—Yours of Nov. 9th, has been forwarded to me here. I have been East for some weeks and will remain for some time yet.

In reply to your enquiries, would say that California offers very fair inducements for permanent homes but it takes both Capital, time and much labor, to secure or make such a home as we find in the Eastern or even Western States. There is good "raw material" out of which to hew homes. You ask me to name some points that I deem favorable for getting locations. If plenty of capital I would name Alameda, Santa Clara, or Napa Counties as being near San Francisco, and offering all the advantages of markets etc. They are very choice Counties for fruit etc., but only fair for bee-keeping. For cheap and good lands I am not well posted, but have heard Merced, Stanislaus and Inyo Counties named as being good places to settle, etc.

For some tropical fruits Los Angeles, Santa Barbara, and San Bernardino Counties are being filled up quite rapidly. These counties are good for bee raising. San Diego is also a good county for bees but the most desirable ranges are now occupied and at a very early date the business will be overdone, I mean overstocked. I went there when there were no bees in the Co. but my operations attracted the attention of the public and general rush has been the result; loss to many will surely follow. There are as good ranges for bees in the above counties as in San Diego. The bee belt is very narrow, extending along the granite range of mountains, back a distance of from 20 to 35 miles from the Ocean. Thus every thing has to be hauled, both supplies etc., as well as product. Then it is a most lonesome life to be isolated, miles away from any neighbors in the deep gorges or canons in the mountains. It is costly as well, and to reside thus with families is not agreeable, particularly to families.

A very busy business and a toilsome one is successful bee-keeping in California. The story of 500 lbs. per hive, is perhaps true of an isolated case; 50 lbs. of good marketable honey is a large average of the general run of Apiaries. I have done much better it is true, but the secret is I have a set of trained men and work with ample capital and thus am able to make a fair profit where those new to the business (and all are new who have not had a training in California) could not make bee-keeping pay. I would be glad to be able to give you more definite information, but I have traveled so little in California that I have to give you some hearsay as well as a little experience.

I have many letters of a similar character to yours to answer and have but limited time to give them attention, etc.

HONEY COLUMN.

WE have received samples of jarred honey from Jesse H. Lippincott, Pittsburg, Pa., that are much ahead of anything in the line we have before seen. It is put up in 1 lb. tumblers, and 1 and 2 lb. jars, and is made perfectly clean and secure by very heavy tin foil caps. Besides we had the pleasure of tasting a jar of Harbison's great crop of San Diego Mountain honey, and notwithstanding what Mr. King says in regard to it, we all unhesitatingly (Novice, Mrs. N., P. G.—or *Presiding Genius*, her name is too long to spell it all out every time—and last of all Blue Eyes; her opinion on all *sweet* things, by the way, is heavy testimony in our ranch) pronounce it without exception the finest honey we have tasted. It has a peculiar mild flavor, almost suggestive of mountains, and yet we think it one that we would never tire of. Of the two samples, Extracted and Comb honey, we could distinguish no difference. We heartily wish we could give you *all* a taste.

Mr. Tweed also sent us a sample of Blue Thistle honey, and one of the plants. The honey will compare favorably both in color and taste with Clover honey. But what perhaps will interest us all most, is Mr. Harbison's Honey box, or honey frames. We will try and describe it. Small frames, with close fitting sides and top, are placed together so as to make a box of any desired length. Will it not be well in making these frames, to adopt one uniform size? where no good reason demands a different one, we suggest Harbison's which is as follows:



The sides and top, A, B, C, are all made of pine $\frac{3}{8}$ thick and $1\frac{1}{8}$ wide. The bottom bar D, is a stick $\frac{5}{8}$ square, nailed in with one corner downward; A, and C, are nailed into the end of B, and D, with suitable brads. A, and C, are just $6\frac{1}{2}$ inches long, and have a notch or rabbet $1\text{--}16$ deep by $\frac{5}{8}$ wide cut in the outside of each as shown in the figure. When a number of these sections are placed side by side, thin strips of wood laid in these notches, and tacked slightly into the end sections, holds all together, the spaces between the bottom square pieces, admit the bees with every convenience. One great advantage of these boxes, is the facility afforded for cutting out the comb, to be put in glass jars, and on this account, we would try and procure enough empty comb for a small guide in each frame; any other guide is in the way in cutting out the honey nicely. If the comb can be secured accurately in each frame, they will be very nice for retailing. Glass may be used in the end sections or not, as desired and the sections can be shipped all together as they come from the hive. They are easily broken apart, and can be quickly emptied and returned to the Apiarist. Thanks

are due friend Tweed for the sample section, as well as for many other favors. We take pleasure in saying that the house of J. H. Lippincott, with which he is connected are both able and ready to do all they promise in regard to buying or selling honey. These sections should be made for about \$1.00 per hundred by the quantity. P. S.—Notches are $2\frac{3}{4}$ from top.

Humbugs and Swindles Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one]

MITCHELL has recently paid a visit to Lindsay, Sandusky Co., O., and succeeded in getting \$30.00 for "teaching a class" in bee culture; the instruction was all given in a single lesson occupying only one hour and a half. The "great secrets" were printed, and he had left them at home but agreed to send them to each pupil (?) *by mail*, and that was the last of Mitchell, but the \$30.00 was gone safe and sure. This "class" contained several who had formerly taken GLEANINGS, but they had lost their bees so badly in the winter and spring of '74 that they thought it wouldn't pay to take it any longer. Economy certainly is a fine thing, but how about the \$30.00?

Mr. Benedict thought in the spring that he should come here to raise Queens but did not. From his inquiries I thought if he did, he expected to remove or destroy all the diseased stocks. Mr. N. C. Mitchell also wrote he would come here and raise Queens but he did not. Said also he should want to have control of my bees to insure against contamination.

CHAS. CARPENTER, Kelley's Island, O.

Several patent hive circulars have been sent us, asking us to show them up, but we hardly think it worth while to particularize them, as our readers should all of them be able to decide by this time that we have no occasion to pay any one, for the right, to make anything about a bee hive. The wrong these parties do, is in trying to make out that you must buy their "rights" before you use their devices. Since friend Muth and others have shown the advantage of straw, chaff etc., as absorbents, the patent men have "trotted" out hives with long testimonials for wintering safely out doors.

Says the *Rural New Yorker* of Dec. 12th:

Listen to a patent right vender, if you want to, or to a dealer in clothes, or to a peddler of wonderful fruits illustrated with highly colored pictures—listen patiently, say nothing, and finally, when he has reached the climax of his peroration and wants you to invest, *shake your head*. Don't open your mouth; say nothing; think what you choose, but shake your head and point to the door as a place of exit for such fellows. Don't get into an argument with them; don't ask any questions; let your eyes twinkle as much as they will; but shake off the wool they are attempting to pull over your eyes by shaking your head firmly, dignifiedly and decisively. This recipe has proved, in more than one case, to be decidedly effective, and if acted upon will soon save many a reader more than the cost of a year's subscription to the *RURAL NEW-YORKER*.

Our sentiments exactly, and if it were only followed up, such oily tongued scamps would be absolutely driven to earning a living honestly as other folks do. Patent hive men have almost ceased *trying* to teach bee culture of late. Why is it?

Heads of Grain, FROM DIFFERENT FIELDS.

DEAR NOVICE:—I am working now on the problem of increasing my bees next summer, with only a day or two at a time, some 8 or 10 times. I hardly know whether it is best to have each colony build combs enough to fill a second story, and fill both before making new colonies, or make new colonies first, and have both working on the comb building. From my experiments I am satisfied if I could be home to attend to it, I could furnish them at least half the wax for their comb, but I can't have the time, so must let them make all the wax. I was in hopes you would have been ready before this to put on the market merchantable comb foundations. I am not certain but thin sheets of wax, without any indentations, if properly prepared, are just as good as any.

Can you tell any thing about the culture of catnip? Shall it be sown broadcast and left to grow as a weed? Or shall it be sown in drills with room to cultivate with a horse, between the rows? How much seed will a square rod or any given space require? Or is the best way to scatter seed promiscuously in fence rows, and waste places?

C. C. MILLER, Chicago, Ills. Dec. 2nd, 1874.

If swarming could be prevented and drone comb building avoided, perhaps the former method would give most comb. All things considered however, especially if you have fall pasturage, and desire surplus combs we think you had better divide them as soon as they are strong enough to admit of it safely. Will friend Nevins give us some more definite directions for the culture of Catnip, especially raising plants to bloom the same season?

Mr. J. R. Gardener, of Christiansburg, Va., is the only person we know of who succeeds with artificial comb foundations. We succeeded in getting the bees to use them partially, but it took too much time to fasten the foundations in the frame etc. Bees can work cheaper than we can.

There are but few men interested in bees in this County and great prejudice exists against improved hives and Italian bees, charging my Italians with being the cause of the death of their bees.

PERRY DANIEL, Springhills, Champaign Co., O.

Take courage friend D., they have accused our bees of the same thing, and backed up their assertions by saying they knew they were ours *because they had flour on them*. We had been feeding meal to all the bees in the vicinity gratuitously, and because they died afterwards, it was all laid to the Italians. This was some time ago, they are learning better now.

FRIEND NOVICE:—I have made a foot power buzz saw, it works well. I have kept bees for eight years past. 1874 has been the best season for honey out of the eight. Wintered 7 swarms out of 9 last winter on summer stands. HORACE LIBBY, Lewiston, Maine.

Have just housed my bees. I secured but 350 lbs. ext'd honey, and 200 lbs. box honey, from 45 swarms. WILLIAM TROYER, Annawan, Henry Co., Ills.

But we want to know more about this, friend T. If an apiary of 45 colonies, average less than 12½ lbs. per colony, and with an extract-er too, we fear either you or the bees haven't tried very hard.

Bees swarmed freely but gave little box honey, some filled one box, others not any. Old Geauga is not a bee county. They are never known to fill more than two boxes in one season. W. McBRIDE, Chardon, O.

But, begging your pardon friend B., it is the bee-keeper, not the County. Ten years ago it was generally said that since the country was cleared up, no honey was to be had about here,

and bees were voted unprofitable. We now think that there is honey to be had every season, if we only have the *strong colonies* in time to gather it. See reports in our back Nos. Great yields are reported from all quarters occasionally, and the most successful seem to be coming to the conclusion all around that honey is everywhere if it is only collected.

My bees all died in the winter of '72 and '73. I think they had gathered honey dew. They were heavy in stores. June 1873, bought a box hive and increased to 15; wintered them in a clamp, lost 3 in the spring, got them up to 35 this summer, and 600 lbs. ext'd honey. They are clamped again, in clay land, they came out as dry as when they went in. My cellar is damp. There is a yellow flower that grows in the wet marsh, a kind of Spanish needle that yields honey plentifully in Aug. and Sept., of an amber color. Indian hemp and milk weed both catch the bees feet. I have seen it. Both yield funny tasting honey.

JAS. McLAY, Madison, Wis.

Is it not amazing, that our friends build up so rapidly after their losses? If we are making progress in no other direction, we certainly are learning to "pick up" quickly. Fifteen from one in a season, is about the greatest on record, if friend M. really means he did that.

MR. ROOT, Dear Sir:—I am well pleased with the two Vol's of GLEANINGS, but think I will not take it the coming year. I am in fear I will get too wise, and try different plans and perhaps some that would not work so well as my shed with the curtain arrangement to it.

D. N. KERN, Shimersville, Lehigh Co., Pa.

There now! we have certainly lost one of our old friends, and with a true manly frankness he tells us why. We are getting "too wise" and too many "new plans." We don't "plead guilty" to the former, but really fear you *may* be right in the latter, friend K. Do you really mean to bid us "good by forever?" Who knows but we *may* "swing round" to the "shed with the curtain to it," finally. We have a kind of feeling that we shall see you again sometime after all, but in any event, we can say heartily "long may you live and prosper," and may you continue to be as frank with all, as you have been with us.

Bees did very well here last spring, until the drouth set in, then they ate up most of this honey. I had new swarms fill their hives with honey in three weeks. Have kept bees for eight years and never lost a swarm from any kind of disease. Ilives stand out all the time. Sun Flowers, after the seed is threshed out make excellent feeders. Fine wire in front of a bee hat answers better than a veil as it enables one to see better, stands out from the face and is cooler. Bees like vinegar with their syrup, say a spoonful to a pint.

C. H. ENGLISH, Sullivan, Franklin Co., Mo.

Did you ever! Sunflowers! There friend Miller; raise a field of them for your bees—they are excellent for honey—when the honey is all collected and flowers are dry, thresh out the seed (can't it be ground into meal or "something" to feed them, winters?) dip them in melted wax and there's your artificial comb, strong, light, etc. If it "works" thank Mr. English.

We hardly agree about the wire cloth, all that we have ever tried, obstructs vision much more than the Brussels Net, that we use. We are aware that bees like vinegar. How many of our lady readers have seen them "go for" sweet pickles? But is there no danger of its making them unhealthy, as cider does? We should fear it.

My bees are all right so far. In Sept. they filled every comb full of honey of a rank, peculiar flavor, but do not know what from.

J. H. CRIDDLE, Nashville, Tenn. Dec. 8th, 1874.

Mr. ROOT, Dear Sir:—You spoke of Mr. Axtell being patient and strong or he would have complained of the Peabody extractor. He has used it but little, I used it myself, I extracted four fifths of all the honey we have taken this summer. I had the extractor fastened to the floor by the side of my lounge; I could uncap and extract as fast as he could take out the combs. It seems almost impossible to get hired help who are willing to work with bees, and those who are willing can hardly be trusted with combs of honey or brood; such at least was our experience. I found I could work the extractor very well, while lying on the lounge; perhaps the one we have is better than many of Peabody's make. Husband says he don't see how bee-keepers get along who have no wives, or if they are not willing to help. A big kiss to Blue Eyes.

MRS. S. J. W. AXTELL, Roseville, Warren Co., Ills.

We presume the above was not intended for print but the moral it carries, sweeps, like the discharge from a doubled barreled shot gun, that "scatters" badly besides.

In the first place it hits us for saying so much against the Peabody machine, and truth compels us to say that we don't know how she can have a "better one" for they are all made by machinery, precisely alike. Perhaps nothing but actual trial would show our friend the broad difference in the running of the two kinds, both in speed and power requisite. Secondly, she puts to shame those ladies who think they are not strong enough, or haven't the time to help about the apiary. If we are not mistaken their crop of honey amounted to something like 3000 lbs., and four-fifths of this, 2400, was uncapped and extracted by an invalid, who is only able to set up a part of the time.

Thirdly, those who cannot extract when it should be done, because they are "so busy," and it is so much work.

Fourthly, hired help. They will not go near bees at all, or they cannot be trusted to handle heavy combs, because they are so careless and take so little interest in the welfare of those they are laboring for. Lest this be understood as simply fault finding, we will add that we have the highest respect for every one who earns an honest independence by their labor, and to such we would say, make yourself skillful and trustworthy in all duties you may be likely to have to perform, and you will soon be sought out, and paid an extra price at almost any season of the year.

Fifthly, "Husband" don't see how bee-keepers get along who have no wives. Guess we'll stop, this is "dangerous ground" for we have many subscribers like our next friend:

Also find enclosed Photo of self, the better half I am in fast pursuit of.

M. H. C., Belleville, Mich.

Mr. NOVICE:—You are a study and you remind me of the story familiar to our school days of the traveler who sought protection from the storm and cold at the cave of a Centaur. As he entered the cave he began to blow his fingers. On observing which, the Centaur asked him why he did that, and the reply was "To warm my fingers." Later in the evening the Centaur gave him some hot soup for his supper, before eating which, he began to blow it. "Why do you blow the soup?" asked the Centaur, "To make it cool" was the reply. Whereupon the Centaur turned him out into the storm declaring that none but an evil genius could blow hot and cold with the same breath.

I have carefully read your GLEANINGS "from A. B. C. up to date," as well as the out gushings of your fertile brain in the A. B. J., and I am delighted to find a writer that truthfully delineates the ups and downs of Apistical experience. As well as one who rushes into a test trial, of "New Ideas" that have a promise

of practical use, with an impartial exposition of the results. And yet I am amazed to see how you can blow hot and cold with the same breath, at different times of course. But we won't turn out the GLEANINGS, no, no, we like the scintillations radiating from those digital extremities blow them as you will, and we like the mental soup tempered to suit our hungry palates by the zephyrs of your breath. So blow away, hot or cold, as the spirit moves, so long as we are getting at the truth that keeps us *marching on* to the good of successful Apiculture.

But my Dear Sir, who can understand your description of a buzz saw table, Vol. 1, page 17? it's very muddy. You are not good in portraying machinery and implements of Bee Culture. Had you more experience with patents you would use perspectives, ground plans, and elevations, with sundry sections, cutting the same at a, b, or c, d, etc. etc. in illustrating the valuable improvements of your fertile apiary.

Speaking of buzz saws: This standing on one leg, and churning with the other, while pushing a board astride of the buzz saw, is too much like work, in any kind of moderate weather. I like my plan better. For a balance and band wheel, I use a grind stone near three feet in diameter, (hung truly) to which I "attach" a stout *man* for propelling power. This don't interfere with its use for sharpening tools, and the saw cuts steadily and oh, so easily if not fed too rank.

And this leads us to another suggestion. A "new idea" it may be. A plan for making both large and small frames easily.

Supposing the material for the frames ready cut, of the right thickness, length and breadth, and then suppose a body had a buzz saw, and a grind stone, or a tread-mill, or even a wind-mill, or any other power. And then again suppose they couldn't get, or didn't want your your tin corners, and did want, quick work. Let them, then procure a gang of four saws exactly alike, about six inches in diameter, with the plate $\frac{1}{8}$ of an inch thick, the teeth fine with the points "up set" (flattened out) to cut 3-16 of an inch wide. These saws of course will just fit the arbor of your slitting saw. Place between the saw blades, circular pieces of sheet brass, so that the cutting edges of the teeth are just 3-16 of an inch apart. Adjust the table and guide to cut the desired depth. And then by clamping 50 or 100 frame pieces evenly together, the saws will rapidly cut the ends, so that they will match together, as in Fig. 1.

[Here our pleasant friend tantalizes us by submitting some drawings in perspective that certainly casts our attempts all in the shade. The principle is precisely that of the well known Crandall Building blocks. We may briefly mention that we sometime ago tested the same thing. If we use lumber any thing near as light as with the Metal Corners, the joint even when glued has none of the stiffness and accuracy given by the metal.]

There Friend Novice is a frame that can hang alone, or stand alone, take your choice. And then for sectional surplus honey boxes, why it can't be beaten, not even by Harbison or Adair—perhaps your tins will cipher in with this corner.

By the way our grocery stores are flooded with Chicago Honey (?) put up in glass jars with a piece of comb in each, and selling retail 35 cts. for $\frac{1}{4}$ lb. A good price for melted sugar and water, that before melting costs 9 or 10 cts.—Wish I had 25 lbs. of your liquid white clover honey, slung out of an Italian apiary. Have been eating San Diego—very good but it lacks the aroma of white clover.

GEO. F. FOOTE, M. D. Stamford, Conn.

We have often thought of the plan for honey boxes but do not most of our readers agree that the Harbison box, described on another page, is good enough and easier to make by the masses at large?

We think the San Diego Mountain, superior to Clover or anything else we have ever tasted in the way of honey. Will not our friend put some genuine honey in his market, at a proper price and thus drive out the spurious?

In regard to good drawings: We could readily procure them, but at a cost that GLEANINGS at present would not warrant and we think our friends all desire that we should

make it a self sustaining, and paying institution. Unless we did our fate might be as sad as he who comes next portrays it. We will bear the offer in mind.

If by publishing "GLEANINGS" and making us all Christmas presents for 75c, you get sent "Over the hills to the poor house" you've only to give us a "blast" from the wind-mill before starting and we will surely come to your rescue.

L. B. HOGUE, Loydsville, O.

Mr. ROOT, Dear Sir:—I will commence Nov. 15th, 1873. I put 93 colonies into 2 cellars, dividing nearly equally, which was a mistake for they all should have been put into one cellar but I was afraid of keeping them too warm. One of my cellars was a new one and built late and therefore was very damp and wet; it snowed and blowed into it a foot or two and I did not keep it warm enough—kept it four degrees above freezing, which I find is not sufficient. They all come out alive except one which was Queenless, but some of them were quite weak and died during the spring, as it was very cold and backward. Well, I made up my mind that I had more bees at home than I wanted, to do well, so I let 25 swarms to a novice to "run." The place was Aurora, some eight miles northwest from here. I took them up there in April. Two or three ran down so they had to be built up again, but we extracted 1050 lbs. of honey, got almost a ton of box honey and increased the 25 to 50. I think if they had been rightly managed I might have got 500 lbs. more. I will try and run them myself there next year. Those at home did not do as well, the honey boxes that I generally use hold from 14 to 25 lbs., set crosswise of the hive next to the frames.

Novice I do not have any trouble to get bees to work in boxes. I have one swarm, or divided half, that put 120 lbs. in boxes. I was obliged to sell my honey for 20 cts. My hives are 20½ inches in length, outside measurement and 11 deep, holding 8 frames. My bees worked on flour this fall as late as Nov. 12th, or 14th, quite briskly. I have put my bees in a dry cellar in the sand with a good wall; a double floor above the 8 inch joists and lined under the joists and stuffed with chaff and straw. The north end is also lined. Five ventilators overhead from one foot to two feet square. The bottom is also covered with chaff and the outside hatchway filled with chaff so you see that I have got them warm. There is 150 swarms and no need of a glass house, at least I cannot see it. The temperature seems to want to keep at 45° and that I think is about right, one end of each hive is raised about half an inch and honey boards raised ½ of an inch where they do not have quilts.

One of my neighbors, Mr. J. Noble has wintered his bees in a dry cellar and hardly ever loses any; they came out very strong. Mr. Tenant, another bee-keeper wintered his in a bee house above ground very successfully, though both keep them dry and warm.

ALBERT POTTER, Eureka, Wis. Dec. 6th, 1874.

We sincerely trust friend P. you may never have any need of a "glass house" and that good colonies in good warm, well ventilated cellars, may always winter safely. We shall be most happy to be convinced that we have no worse trouble to contend with.

REPORT FOR 1874.

My bees wintered well; all came out alive, except one, (Queenless) and four others being weak dwindled down and "went out" during the cold rainy weather of April and May, leaving me 30 to begin the season with. I obtained 2550 lbs. ext'd honey from the 30 stands—average 85 lbs. each—and after the honey season was over increased my stands to 40. I think this has been the poorest year here for honey I ever knew. My bees had a good fly on Dec. 2nd, and the next day I put them all in the cellar in nice condition, and now they are all as still as death. Yours, well satisfied,

W. J. RONALD, Grandview, Iowa. Dec. 10th, 1874.

And well you might be, with the above report of the "poorest season you ever knew."

During the winter of the bee malady, all the bees in Langstroth hives died, and two-thirds in others died. All now use common box hives.

W. McBRIDE, Chardon, O. Dec. 16th, 1874.

Such reports came in so often a year or two ago, that we could not have printed them even had we deemed best, but we are glad to note a

better state of affairs now, and we believe it has generally been agreed that it was rather the improper manner in which the movable comb hives were managed, rather than any inherent defect in them.

I am much interested in your experiments, but have no necessity for them here as our bees have never been diseased. They winter safely in cellar or on summer stands. We have not much but clover honey and when that is plenty all goes well. Last season I realized \$400 in box honey and ten natural swarms from 34 colonies, Langstroth hives of course.

JOHN T. SMITH, Uniontown, Fayette Co., Pa.

I have sold 2700 lbs. honey and have 1000 on hand, also have sold \$150.00 worth of Queens, amounting in all to over \$700.00 without counting new swarms, as I reduce them annually.

JOHN L. DAVIS.

Holt, Ingham Co., Mich. Dec. 11th, 1874.

I started last May with 23 very light swarms of bees, mostly hybrids and about 300 good worker comb besides. I got between 3700 and 3800 lbs. of slung honey and now have 59 good swarms and gave one away. The honey brought 17 cts. per lb. clear of expense. I have no trouble in getting worker comb in any swarm by taking away their capped brood, I do this about the time basswood gives out. I make new swarms of the sealed brood by putting 6 or 8 frames in a new hive and giving them a Queen or cell. I get the poor fall honey made into combs.

ERWIN STANHOPE, Pentwater, Oceana Co., Mich.

Thanks friend S., for what is, at least to us, a new idea. We think it very probable the bees would build only worker comb if deprived of their sealed brood, for they would then see the necessity of it. Is not this another missing link that will explain friend Dean's plan, as given on page 91, Vol. 2. If combs can be secured in the fall, made from honey not as valuable, it is quite an important item.

Wintered 17 stands, all I had, without loss last winter, and received about 500 lbs. honey. Have now 27 stands prepared on same plan. One of the two, dollar Queens ordered of you, and sent by Mr. Phelps, produces all three banded workers, the other produces all kinds of workers. I am very well pleased with my bargain. What has become of Mr. Phelps; I don't see his advertisement any more?

C. A. HIGGOLD, Arcadia, Morgan Co., Ills.

Mr. P., with the rest we presume, withdrew his advertisement because he had more orders than he could fill, but all will be on hand again bright and early next season, we think. The pure Queen you mention, as she is daughter of an Imported Queen, is well worth \$5.00 to any one with a dozen hives of bees.

CAN BEES BE KEPT IN A CITY?

Was asked on page 34, Vol. 1. Our reply was given on the same page, and the following from the querist will show how far we were right.

I wintered three swarms in my cellar under my kitchen; they came out finely in the spring. They were in three kinds of hives,—no movable combs. In May had them transferred into Langstroth hives. In June got some Queens (black) and started three more swarms, one from each old one. The way I did it was by driving out some bees from the old swarm and putting them in the new hive which was placed on the old stand. My frames were all filled with combs and some honey when I bought them. They have done very well this season. I have taken 150 lbs. (or more) box honey. And the frames are well filled with honey, for wintering. Bought one Italian swarm this fall, so now I have seven swarms in my cellar. My cellar is a dry sandy one.

Please don't put me down among "Blasted Hopes," till another spring. I would like to know how to secure straight combs in small boxes, where there is no comb to start them. My boxes hold about 5½ lbs. of honey, which is the most convenient market size here. My bees would build across them, where there was no old comb put in to stop them. Have sold some of my honey at 40 cts. per lb. How is this for City life? Not a failure yet. STEPHEN WILLIAMS, Nashua, N. H.

DEAR FRIEND:—As I have never made any report to you as to my "Bees and Honey" I will do so now. Last fall I had 32 stands, one starved and one lost their Queen, which left me 30. Only ten of these were good, ten medium and ten very poor; six of the latter never made *one box* of honey. I used the extractor I got of you, and like it very much; think it is one of the *best* if not the *very best*. With it I got some 300 lbs. but the Queens filled the combs so that I could use it no more. My hives are Langstroth's with 8 frames, don't see how you get so much honey with extractor unless you have more room for the Queen. Had to put on my honey boxes and got 1686 lbs. that I sold, besides some 130 six lb. boxes that are partly filled, and have increased to 57 stands. These I think are in good condition at present. My first swarm issued on the last day of May. I gave them 7 frames of comb and they built one. In eight days I ext'd five frames and got 36 lbs. of honey, then put on my boxes, and got 12 filled, (some 75 lbs.) and some partly filled. I think that is very well, though some have done better. One man in this County had last spring 80 stands and got over 7500 lbs. of box honey which he says averaged him 28 cts. per lb. Another man had a stand that produced over 300 lbs. of box honey. I had one from which I took 200 lbs. I think this County will in five years, if it does not now, ship more honey than any other Co., in this State.

JOSEPH A. HART, Craig, Switzerland Co., Ind.

Another report in favor of small hives. Friend H. you must put on an extra set of combs above, or make your hives to hold more than eight Langstroth frames if you are going to make the extractor do duty. Box honey isn't *quite* all done away with after all. If we get some "big" colonies next spring, *we'll* try it once more.

CONCERNING SEVERAL PROBLEMS.

But what makes me write to you is about that dwindling away of bees last spring. I too had such, and some of my *very best* got to be the weakest. I think I can throw some light on the subject. I wintered 19 stocks, 6 out on summer stands and the rest in cellar, 5 of those outside never receded but kept strong, all the while, but the sixth came very near giving out the first week in May. They had brood on four combs but not bees to cover it and all young, consequently the robbers had every chance of stealing from them. I did all that a man could do to counteract marauding for near ten days when the bees themselves began to fight these robbers. The guardians at the entrance would be attacked by these robbers by three and four and if you ever noticed it, it gives a strange appearance. They will rush all on one bee and when down, attack another etc., and these young bees will easily submit and give up. Now this stock did not rear brood the fall before, later than the 25th of Aug. On 1st of Sept. it had scarcely any sealed brood and none else, but being very strong it remained so until April when they showed considerable decrease in old bees. They had brood on two combs March 15th and kept increasing the brood space until they had four combs by April 15th. Now one would think breeding at that rate they should have got strong, but I am certain that the old bees were nearly all gone by the 15th of April, and as the old bees die off the young ones although matured to take the place of the old ones, can not stand the chilly weather as well as such bees as have been raised in the fall before. Adult bees are the ones that will fetch a hive along, and so long as there is a good portion of them in a hive the young bees raised in spring will not come out so soon to work, and will consequently fill up the hive, and by the time, say 15th of May, when the weather begins to be steadily warm, the old bees will be nearly all gone even if raised in Oct., and then these young bees will be able to stand the weather. You surely know that when a hive is in its proper order and breeding in the middle of summer, the young bees will not come out to *work* till they are nearly 30 days old, but move the hive to a new stand and you will find that any bees remaining after two days, are but ten days old, and will fetch bee bread etc., the third day from the removal of the old stand.

I had one stock that I started Aug. 25th with two frames brood and adhering bees and young Queen. They bred on four combs and kept them full till 15th Oct., and on that day (they only had brood on one comb all sealed and yet a weak one would cover three combs pretty well) I put them in the cellar; they hadn't a particle of bee bread and I wondered if they would come out at all. March 28th they had first flight, and not two dozen dead bees. They wintered

best of any; put back in cellar again till 26th of April when they hadn't any brood and I wondered if the Queen was good, for all the rest were rearing brood strongly; I gave them a comb with some bee bread in it and they started brood, and instead of going down a hill they grew strong. I will never trouble myself about bee bread during winter and early spring in those stocks that I can keep in a dark cellar until the new bee bread makes its appearance; for bees that have no bee bread keep wonderfully quiet. I believe the bees can be kept thus without dying of old age till June. Its the *brood rearing* that wears out the bees. I furnish you evidence and you can test it yourself. This summer I started several stocks with combs of brood and found in one they had a young Queen that laid no eggs. She was just hatched when starting the stock and in three weeks I found the number of bees scarcely any reduced. I gave them empty frames to make comb; as I kept taking away their old comb, they made three combs and covered them, nearly as strong as they did when they had the old ones. Comb making, my experiment shows, does not wear out bees, which opinion I had before, but never had so clear a proof of it. Another, in fact its sister, with just the same strength in bees, were treated the same way, and made three combs but they having a laying Queen, filled the whole three combs (10x12) with brood, and by the time the first bees hatched, there wasn't enough bees to cover one comb. They would have perished had the weather been cool.

C. WURSTER, Kleinburg, Canada.

There is certainly some truth in the position taken by friend W. We now remember well that when we have in mid-summer put an Italian Queen in a stock of blacks, it would be perhaps three weeks after the young Italians hatched before they would gather pollen. Again, in a colony having no old bees, they sometimes gather it when less than a week old unless we have erred in our observations. Also, the dwindling away in spring invariably takes place when they attempt brood rearing; we conjectured that they got lost in going for pollen during unseasonable weather yet it hardly seemed probable after all. If comb building *is not* exhaustive, it will be an argument somewhat in favor of box honey.

MR. NOVICE:—Receive my heartiest thanks for your untiring efforts in bringing light and instruction to such as I. I just now feel like giving you one of those "big hand shakes" that come from the heart. Among many valuable hints I will only name one, that you justly call the universal feeder described in Sept., Vol. 2, it is simple, cheap, and what is more, convenient, and the best thing out in that line. I would not part with it for the price of ten times what you ask for GLEANINGS. Enclosed you will find the money for two, for the coming year and also for the back Nos. of GLEANINGS, Vol. 1, and 2. Wishing you the best success and hoping that you will be able to keep the Wind-mill well greased that it may run for many years to come, I remain yours truly,

E. RIEBSMAN, Wilkesbarre, Pa. Dec 5th, 1874.

After reading friend Kern's letter we got such a dismal opinion of our merits Editorially, that we fear we should not have recovered for some time if not longer, had not the above arrived just in the nick of time and vibrated us way over to the other extreme.

Thanks friend R., we'll try to keep every thing well "greased" and to merit your good opinion still.

Four years ago I had 60 stocks. Reduced them to 30 as I was moving and the 30 have dwindled down to 8 from dysentery etc., and one of them Queenless; but with some feeding and syrup in the spring hope to reach 20 again. FRED. C. NASH, Ontario, Can.

Supposing we had it in our power to make them "dwindle up" instead of down at any season, friend N.? Don't you think we could then tell a different story?

ADVERTISERS' DEPARTMENT.

We can furnish the German *Bienen Zeitung* Monthly, (price \$3.50) with GLEANINGS for \$4.00, including all postage.

MEDLEY is not ready. Some of the "cogs" must be loose we think, in the machinery we have improvised for inducing some of those from whom pictures would be particularly desirable, to send them in. Some time this month you may expect the whole family of us by mail. We have thought of giving a short sketch of the different individuals by way of introduction. What we don't know we can "guess at" providing we are careful to step on nobody's toes, for they might turn about, and we are "so 'tittle" (as Blue Eyes says) compared with some of those "big chaps." By the way, we are proud to say, we are going to have quite a smart little company of Ladies, among which will be found that Heroine of the Extractor, Katie Grimm. Her father also favors us with his presence.

CLUBBING LIST.

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GLEANINGS

IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. III

February, 1875.

No. 2

In the Preparation of this Journal the following are the Principal Periodicals Consulted:
American Bee Journal. Clarke, and Mrs. Tupper.

Bee-Keeper's Magazine. King.

Bee World. A. F. Moon & Co.

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Southern Farmer,

Scientific American.

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SUNDRY MATTERS.

SEE advertisement of *Ohio Farmer* in this No. It is among the oldest of its kind in the country, and in many respects fills a place that could not well be occupied by any other paper. It is a large, tastefully printed, weekly paper, and the series of excellent homelike letters from "Mrs. Sam Starkey" should alone give it a warm welcome in every farmer's home.

IN our March No. we will enclose to every one of you, three samples of what we can do on Honey Labels, both in quality of work and prices. It always affords us pleasure to be able to reduce prices on any staple commodity to our customers; and when we can at the same time show them something *unusually neat and pretty*, it is an additional pleasure.

WHEN we are in want of any seeds that must be absolutely just what we order, we always go to B. H. Stair & Co., and our business experience with them has been for many years of the pleasantest nature. And now Messrs B. H. S. & Co., we wish you to be prepared to furnish our readers with the *genuine* Chinese Mustard seed mentioned by Dr. Kirtland in his excellent letter.

WAX WANTED.

I am using in my business considerable bees wax. I am troubled to find the *pure article* in sufficient quantity to meet my demand. Am not particular about the color, the dark wax will answer my purpose just as well. J. R. SOUTHWORTH, North Brookfield, Mass.

"PRESENTS," have at length all been mailed, and if any who subscribed before Jan. 1st, has not had theirs, they will please drop us a Postal. Read what Miss Anna Saunders says of it. We hope she won't scold if we do put it in print.

Thanks, thanks, *thanks*, for my present—It is better than a dozen Chromos. * * * *
Woodville, Miss. Jan. 13th, 1875.

Mailed to any one who sends one subscription besides their own.

NEARLY every applicant for gearing for extractors, so far this year, has omitted to mention size of frame used, so that we were obliged to delay filling orders until we could get a second note from them. Please bear in mind that we have two different castings for the arm that attaches the gearing to the side of the can. One with the proper curve to fit a 20 inch can, and the other for a 17 inch can. The former should be used for Quinby, American, and all frames that exceed 11 $\frac{1}{4}$ inches in measurement the narrowest way; the latter for Langstroth, Gallup, and all that have one of their dimensions 11 $\frac{1}{4}$ or less. We prefer to use the large size for our Standard as it enables us to hang it in the extractor just as it hangs in the hive.

As there now seems a prospect of making our Medley more complete than at first intended we shall delay it still further. An invitation is *without exception* extended to all Bee-keepers in—well, in the world for that matter, to send in their Photo's. We shall put in every picture sent us, so that there may be no ground for accusing us of partiality in the matter. Quinby and Langstroth we presume you all agree should be accorded a central position in view of their having taught us all our A, B, C's in the science years ago. The rest are to be measured solely by the crops of honey they have produced, for we measure an Apiarist entirely by the number of colonies he can keep and by the number of tons of honey he sells annually.

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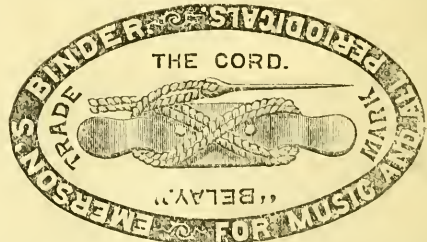
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You cannot look over the back No's of GLEANINGS or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—perhaps only mentally—"Confound it I must have last month's Journal and it's no where to be found." Put each No. in the Emerson Binder as soon as it comes and you can sit down happy, any time you wish to find any thing you may have previously seen even though it were months ago.

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GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

FEBRUARY, 1, 1875.

No. II.

PLEASANT AND UNPLEASANT FEATURES OF THE APIARY.

BY A BEE-KEEPER'S WIFE.

MR. EDITOR:—I have no idea of trying to quarrel with you for saying that people had better learn not to mind bee stings, instead of hunting up cures. However, there is an occasional sting that is worth minding, and curing if you can.

My little "Blue Eyes" had picked up a stray bee or two, and been stung on her fingers, with no serious effect, and we thought a little salt and water, remedy enough, even on baby flesh, but one very warm day last summer, when the bees were unusually cross and her blood much heated, she stood watching the bees, and one stung her in the upper eye lid. The sting was extracted as soon as possible, and her hands held from rubbing it, but within three minutes she was covered from head to foot with large blotches, each, apparently, as bad as a bee sting. I washed her in saleratus water, which soon cooled the fire and reduced the swelling, so that she soon went to sleep, but the right hand and foot, and face were swollen for some days. I had regarded a sting as a light matter before, but about the same time I received a sting that affected me about the same, but as it was on my throat, the swelling and inflammation extended to the lungs, and breathing was very difficult and painful; I suffered extremely all that day, and was confined to my bed the greater part of three days. One thing that seemed to me strange was that the extremities were the most swollen.

For similar cases, a remedy should be known "if any such there be." If others know of no better, I would recommend saleratus water,—that is if one does not understand the use of water well enough to try the "wet sheet pack" a la Gallup.

Now, my success in bee-keeping! My husband has reported his—here is mine. But why *mine*, you ask? I answer. You know a woman is frequently wanting some new furniture or other extravagance and don't know when to take the money, because it always seems to be needed more for copper-toed-shoes, reapers, bee fixtures, etc. I wanted an organ. So husband says, "select a swarm of bees in the spring, and we will devote all the proceeds to the organ and in course of time it will buy one, providing it does not come before."

Bees were weak, that spring, and the "Organ hive" did not get ready to swarm till Basswood season, then were not allowed to, but they furnished 225 lbs. of honey worth \$30.00. The next year one new swarm and 175 lbs. honey, which sold for \$27.00. Now I wish I could stop, but one swarm died last winter, and the other gathered only 15 lbs. of surplus honey this year. Never mind—another year is coming, and it will bring summer and honey, I know.

But my, my, this is too long for GLEANINGS! Well never mind, Novice will read it any way. He reads all the nonsense and I couldn't shorten it; a woman's fingers, like her tongue, are so long.

Mrs. S. ROWELL, Faribault, Rice Co., Minn.

But it isn't a bit too long in our opinion and we trust our readers approve of our taste and judgment in such matters. We have had a *very few* cases come under our observation where stings produced similar effects, and would bathe with cold water by all means to allay the fever and irritation. It is quite probable that the alkali of the saleratus would tend to cleanse the pores of the skin thereby enabling the water to perform its work more

effectively. [If this isn't correct we beg pardon of the M. D.'s, among our readers, of which there are many.] If you will excuse it Mrs. R., we should like to suggest that fright and the imagination has much to do with these alarming symptoms, especially among the inexperienced. In your own case probably not, yet we have a few times had stings ourselves of such pungency, that had we not reasoned from experience, we might have been seriously alarmed. There is a queer feature in humanity of which physicians are well aware, viz: that so long as the mind dwells on an injury (mental or physical) it assumes to the patient ten-fold magnitude. Who has not forgotten the excruciating pain of a headache or toothache, upon the arrival of friends or any other event, that actively employed both mind and body. We really can discover no good reason for giving any further advice than we did at first, viz: after extracting the sting (every "little splinter," P. G. says) get to work at something as speedily as possible, that will busily employ both mind and body. We earnestly request that you keep us posted in regard to that "Organ live."

P. S.—In regard to bee stings: will some competent medical authority tell us whether it really be possible for any application to reach the poison introduced by the sting. The puncture is so minute and deep, and the skin closes again so perfectly, that it is very rare that even blood finds its way back. Can we expect our tinctures to reach the poison in order to neutralize it, without an instrument like the sting to introduce it? Some Yankee might invent a machine and sell "individual rights" 'tis true, but at present had we not best satisfy ourselves that when we have used cold water to allay the fever, in extreme cases, we have done about all we can do. *Sucking* the poison out is very good logic; when one has satisfied himself that he really has strength enough in the proper muscles to do this, we should advise it by all means; as the plan of employing an expert in this art, to treat patients promiscuously might be one of doubtful expediency, we think we may be excused for going back to our original advice, to "go on with your work and let 'em alone." Now can we not drop the subject for at least one whole year?

OUR OWN APIARY.

IN consequence of press of business pertaining to the new year the inmates of the forcing house have been allowed to slumber for the past few weeks. Wintry days when the

sun does not shine they winter as quietly as if in the open air, and for the past week it has made very little difference if the sun did shine for with a temperature below zero our glass is so obscured by frost that very few of the sun's rays get through. Without any artificial heat, and with the sash in a very insecure manner the bees have only once been subjected to a freezing temperature and then only for a short time (Jan. 9th.) when the temperature was outside 18° below zero. The adjoining underground apartment answers excellently the purpose of modifying the extremes of both heat and cold. We have had some extra sash made to be placed at an angle of 45° over the horizontal one, and proposed getting this in place before the intense cold weather: in this however we were prevented.

WINTERING BEES IN COLD FRAMES.

A PAPER READ BEFORE THE SEVENTH ANNUAL SESSION OF THE MICH. BEE-KEEPER'S ASSOCIATION HELD IN KALAMAZOO, DEC. 16, AND 17, 1874, BY H. E. BIDWELL, SOUTH HAVEN, MICH.

NOTWITHSTANDING the important knowledge which we possess on the subject of wintering bees, it is still impossible not to recognize the humiliating fact that this is the source of our greatest loss. The invention of movable frame hives marked an important era in the management of bees, and the introduction of Italian bees increased the yield of honey and the number of colonies. The introduction of these two great improvements in bee culture bro't with them also two comparative evils, which have, until now, never been overcome.

The movable frame furnished an air passage around and between the combs, by which the cold air in winter chilled the honey and bees. This was overcome in a great measure by the use of close fitting frames, which on account of their inconvenience in handling have not come into general use. The Italian bees were of a higher temperament and more sensitive to cold. These two evils I believe are now overcome in the use of cold frames.

My average loss by the ordinary methods of wintering bees for the last twelve years, has been over one fifth of the colonies, and nearly four-fifths of the bees. With the use of cold frames, I am confident I can preserve swarms from flowers to flowers, with their full numbers.

On the third of last September, while the bees were yet busy at work on the Golden rod we placed 80 colonies in five beds, from which they were allowed to fly out freely as long as they could get honey enough to pay, which terminated on the 6th of October, when the sash were placed on and covered with boards. The weather during the remainder of the month was unusually warm and clear, and the 132 swarms remaining out were continually flying far and near, searching for something to work upon. They were poorly compensated by a few frosted melons, some cull peaches and pears and an occasional bunch of grapes. This illly repaid the loss of five pounds of honey and over 5000 bees to each colony. Every precaution was used to keep the bees quiet, such as fastening down the honey-boards and covering them with caps; contracting the entrance and shading the front of the hive with boards; and erecting division fences. This was a great gain, and was also being done to protect them from the severity of the coming winter. The bees in the bed remained quiet except when allowed to fly out an hour or two on the 2nd and 25th of November, and the 15th of December.

Care should be exercised in having the beds dry when the bees are put in, and the sash nearly level, having only sufficient slope to the south to carry off the rain. It is practicable to bring the hives together near their summer stands and cover them there with the frames, which can be removed in the spring and the hives returned to their original stands. Two precautions should be observed—the same relative position should be preserved and the hives should be moved without jarring or disturbing the bees. As the severity of winter approaches, the beds should be banked up with earth, straw or litter to preserve the uniformity of temperature within, which, when covered with boards should be from 40 to 60°; and when warmed up by the sun, when the boards are removed,

from 70 to 80°. A trap for catching any mice which may happen to get in, and a thermometer suspended inside for making observations, completes the process, which I hope, trust and believe will save enough bees to make successful bee culture, not the exception, but the rule.

FRIEND NOVICE:—I went over to see Mr. Bidwell to-day, and get his paper, a copy of which I send you. I found his bees that are in the cold frames, in good condition, while those on their summer stands need a fly badly, to void their faces. Wintering under glass, as practiced by Mr. Bidwell is undoubtedly a success. As nearly as I could judge, there were perhaps a table spoonful of dead bees, to the hive, on the bottom of Mr Bidwell's cold frames. There could not have been more. This you will see, is reducing the loss to the minimum, as the bees have been in these cold frames about four months. Thus far, the loss all told, from the colonies (16) in one bed does not reach the amount often lost from a single colony, in one day, in the month of October.

HERBERT A. BURCH.

South Haven, Mich. Jan. 12th, 1875.

Mr. B's plan of moving the hives in the fall and spring, we should be inclined to oppose, both on account of labor involved and confusion and disturbance that seems to us has resulted among the bees when we have moved them thus.

His loss of bees is less than ours but our own now get back quite satisfactorily. Although the outside air was very near zero on the 17th of Jan. we by artificial heat filled the air so full of bees under the glass that it seemed as if they never could get back strait, yet in the evening we found just *four* bees remaining on the sash, No trace of dysentery, hives clean as in summer.

[For Gleanings.]

FRAMES.

BY (at least some of it is) M. QUINBY.

WHEN you speak of the Quinby frame do you mean a frame just so large? and are all frames just that size, for any hive and plan, Quinby's? If I make some 6x12 whose will they be? Does Capt. Hetherington, Elwood and some others, who use a frame two inches shorter than I do tell the truth, when they tell us they use the Quinby frame? I want the Quinby frame distinguished from others, by something else, than size. The size I use at present, accommodates me, when a smaller one, does not. Let the fault be found where you think it is. If it is the fear of superceding what is already used, say so. I believe it will be universally used (as I make it now) as soon as bee-keepers learn a little better how to manage bees. When president Clark acknowledged that he could not manage a Quinby hive, in cold weather, he did not compliment himself on his skill and experience. I expect to make some hives with just the frames, that will be cheaply made, and will do to practice with equally well as any for extracting.

M. QUINBY, St. Johnsville, N. Y.

If it is *us* that our friend is talking to we can answer without hesitation that in our attempts to classify frames we called everything *Quinby* that was *about* a foot high, and a foot and a half long. We got the dimensions as near as we could from Mr. Q's book, and after a while supposing we had found good reasons for thinking our first dimensions an error, we changed them, and thereby made trouble by giving our customers two different sizes under the same name. No one has ever favored us with a suggestion, that we can recollect, to aid in our attempt to classify and render uniform the five principal frames in use.

Mr. Quinby in his book describes a hanging frame, and many such are in use; later he has made a "closed ends" frame that stands on the bottom-board. We think we shall get on better if we frankly admit that we have, perhaps unwisely, looked with very little favor on this last arrangement. Mr. Q. we beg pardon. We have very little "*few*" of any thing or any body,

(very likely, on the ground that he who "knows nothing fears nothing") and we do not fear to confess we have been in error, when convinced of it; not even if it involves pecuniary loss to ourselves. Before going farther we may say in justice to ourselves that we would smile, to see the person who would dare undertake to find the Queen or extract the honey from a dozen Q. hives as quickly as we could from a like number of our suspended frame hives. Now we have studied hard at intervals for the past six months on a hive so made that two combs would make a nucleus hive that could be enlarged by more of the same kind as needed, to a 20 frame hive or more, and also that this 20 comb hive could be quickly divided into 10, two comb nucleus hives, etc. We have such nucleus hives now in use, and have only been prevented from mentioning them in print by P. G.'s remonstrance (she is ill with the Typhoid fever now) that we were in too much of a hurry with our improvements. This whole hive was to be made of only three different bits of wood except the frames and it some time ago occurred to us that on Quinby's plan, three pieces of wood would make the hive *without any frames*; that is if we have the sections that constitute the hive answer for frames also. Now a serious question arises; are the old style box hives any better for wintering, and brood rearing, than *movable frame* hives? Is the space around the frames undesirable? Quinby urges this strongly but it is *his* hive and (begging his pardon) we should like some others to say so too. We rather think Elwood and Capt. Hetherington favor the idea.

When one has plenty of time to manipulate such hives, and but little money to invest in more convenient and better ones (we use this phrase only after careful contemplation and consideration) perhaps the honey frame described last month, enlarged to the proper size, may be *all the hive needed for profitable bee culture*. Three sticks cut accurately by machinery—samples, or whole hives can be sent by mail—and our troubles are all over. Stretch them out long, or pile 'em up two or three stories at your own sweet will, and without any quarreling. We presume Mr. Q. can tell you how to cover the outside combs and top, cheaply. Very likely we shall get a "bigger pile of letters" than we have now, in remonstrance, but dear friends such a pile of honey as Elwood, Hetherington and Root, (we think *now* he must be some relative,) will have more weight with us than 40 pages of foolscap. Please don't feel unfriendly, but we really *cannot* publish all these letters. Just compare these two items clipped at random with our scissors from the middle of letters.

I would not *give* a New Idea hive away, much less *sell* it. I tried 12 of them and think I lost about \$50.00 on that number in one season. Novice you had better give up your "Standard New Idea" and I will send you a sample hive holding ten 12x12 frames and 40 section frames, etc.

R. S. BECKTELL, New Buffalo, Mich.

Last season I had 9 stocks in American hives—most of them with empty combs in second story—and didn't get 50 lbs. honey out of upper combs—Bees would not store honey in empty combs above, when they would build, and fill combs rapidly below, hence I conclude two story hives are not my *best* holt.

L. D. PARKER, Chicago, Ill.

Both used the same frame, American, 12x12. Who is correct? Are we not right in thinking

that either form would give honey perhaps equally, were no other conditions wanting? We never expected any great advantage, but only hoped the long hives would do equally as well, and abundant reports we think corroborate this notwithstanding the few adverse reports like the former one, above. It is the same in regard to wintering, taking the reports all together, we must think it a disease, and that severe cold aggravates it especially after the colony has become thinned down so they are incapable of making a cluster large enough to generate the requisite warmth. Most of those who have wintered the most successfully, have had a dwindling down in the spring in numbers that was in former years unknown, and this is the case even in the warmer latitudes of the South. Bees fly out on the snow, get on the bee house floor, or if confined to the hive, accumulate on the bottom boards, in a way they did not formerly. So long as we get enough bees through to save the Queens, we say we wintered them, but are they really wintered as they used to winter? Please don't stop writing; the facts you furnish us are thankfully received and carefully read, but we are sure very few of our readers would care to go over it all as we do.

The question keeps coming: "What hive do you advise? you are acquainted with the results, and opinions expressed in regard to most of them. What shall we start with so as to be sure and start right?" Once we thought one hive would do for all but we fear it is something like advising a farmer that we do not know, as to what crops he shall raise. If our opinion will help you any, here it is in as small compass as we can possibly make it.

WHAT HIVE SHALL I USE?

If you are already using Langstroth frame, Quinby, Gallup, American, or Adair, keep on using them, at least for the present. We do not think there is any *great advantage* in changing. If you think proper, test one or two broad hives that will hold from 16 to 20 of these same frames, the hives are cheaper, and *we think* more convenient for the extractor. If you are just commencing, we suggest that you adopt our Standard Hive, not that it will give *more* honey than any of the others, but that *we think* it saves much valuable time, where time is limited. Where one has plenty of leisure, Mr. Quinby's cheap hive has many advantages, and we may be mistaken about the time needed by an expert to open and close these hives.

To make a real Quinby frame, take two end pieces each $11\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$; nail these into the ends of top and bottom bars each $1 \times 18\frac{1}{2}$, the former $\frac{1}{2}$ inch thick, and the latter $\frac{3}{8}$ only. The top bar is nailed in flush with the tops of end bars, the bottom bar raised $\frac{3}{8}$; this allows a passage between bottom board and bottom bars when the frames stands on the lower ends of the two end pieces. Quinby uses a large triangular comb guide nailed on the underside of the top bar. We should prefer a very thin strip of pine. Even bad workmanship makes little difference with these cheap hives for they are bound to "fit" any way. When you wish to house your bees simply carry in as many frames as the bees are clustered on and leave the balance to give the frost a chance to freeze out the moth millers.

"HOPES" NOT "BLASTED."

BY A FARMER'S WIFE.

FRIEND NOVICE:—I would like to write you a long, a very long letter, and tell you all about my experience this year, but I will endeavor to be brief, if I can, for when I get talking or writing about bees I don't know when to stop. Now if I could just see you, and have a good talk, that would be real comfort, to me at least, for I can talk at the rate of forty miles an hour, so my husband says and he ought to know. GLEANINGS has been a great help and comfort to me, for if my name *must* be recorded in the column of "Blasted Hopes," I like to read of the success of others, and it gives me faith that "what man has done, man may do." And I like to read about Novice's experiments, and think what a comfort it must be to have a work-shop, and tools, and *muscle* to use them, and be able to work out inventions and improvements. Ah Mr. Novice just think how you would feel with your head full of all the making, modeling, experimenting, building and planning, of hives, frames, extractors, and the other numerous articles, that you have successfully *worked out* since you commenced bee-keeping; just imagine I say, how you would feel if you hadn't "*the strength of a rat*" and had to hire it all done, or let it go. If you never realized it before, *be thankful that you are a man*, and be very good to your wife, because she is unfortunate enough to be a woman.

Out of eight colonies of blacks that I bought last spring I have put five in the cellar; four Italianized and one with black Queen. Had to feed them sugar syrup for winter stores. Don't think I fed early enough or fast enough for they did not get more than one-third of it sealed. But I find that some of the syrup that was left in the tin that I made it in, has not candied in the least, so I hope it will be all right. I am of P. G.'s opinion, that syrup is better to be *boiled*, for when I did not boil it, it would *candy*, or *sugar*, on the feeders. I have one colony of very nice marked Italians but they are very weak, only cover three combs, think I shall have to unite them in the spring, ought to perhaps this fall but had hardly faith in my own judgment and let it go. If we don't have a far different spring next year, from what we had last, I have every reason to suppose that my success will still be in a decreasing ratio, for this past year has been a hard one for bees here, cold and backward spring, drought and *no honey* after basswood season.

I think that this is not a very good place for bees for pasturage is *too scattering*. White clover only on the road side. Basswood scattering up and down the river from a half a mile upwards, and but few scattering trees at that. A little Buckwheat is sown within a half mile. My husband has just bought a farm, and has promised to set out some basswoods, in the spring, and wishes to take the *Prairie Farmer*. I wish he could take something to give him faith in bee-keeping, for he has no more in it than I have in *perpetual motion*. But my faith is like a mountain, and I am *bound* to succeed.

I have not written on one side of the paper for this is not a letter to an Editor, but to *Friend Novice*, with whom I feel acquainted and who I hope to see sometime and also little "Blue Eyes" and P. G.

MRS. E. M. MCKALEN, Manchester, Delavan Co., Iowa. Dec. 28th, 1874.

Now Mrs. M., perhaps it is very fortunate that you cannot see us and have a "good talk" for to be candid, we should quarrel awfully unless you would give up some of the ideas you have just expressed, and a woman never "gives up" especially if she is *wrong*.

In the first place, begging your pardon, we don't believe a word about your not having the "strength of a rat" and to prove our position we will appeal to your husband especially when you wish to accomplish something that has had just enough opposition, to arouse your ambition. Your getting an idea that you have no strength, may be your worst weakness. We shan't admit that Mrs. N. is unfortunate at all in *being a woman* but we should consider it a great misfortune if she should get the idea that her sex in any way gave her a less chance of being useful to her fellow beings. Very likely the more you talk to your husband, the more

firmly he will become set in his incredulity, husbands are much like wives sometimes in this respect. Just drop the subject until you can show him 50 or 100 lbs. of honey from a colony. Don't let the idea get into your head that your locality is at fault. The admission that you fed late makes us think the fault is all your own. Do not be in a hurry to increase your number of stocks; on the contrary endeavor to keep them all in one hive as long as possible; after you can show a good report from a few, and have got the upper hand, then you can think of increase. Boil the syrup by all means if you prefer to.

We fear the above *does* almost look "quarrelsome," but then Mrs. M. the very best friends we have in the world are the ones with whom we have had the "biggest quarrels," and we earnestly hope to see you not only convince your husband, but other folks too, that women can succeed as bee-keepers and that they *have* as much strength of brain if not of muscle as the other sex; at any rate their power to make mankind better, which is a far more important thing than either, we honestly believe to be far in excess. Did you really get no honey from your eight colonies? and what have you done with the other three? If your experience has so far been all outlays, and no income, we would reverse it next season at all hazards. You have hives enough and if you can't do any better, take out comb honey in frames, until they can pay for an extractor themselves. Be independent, and make your bees be independent also. People that pay for everything as they go along, are the happiest, and have the best right to be the sauciest (if they wish to be) of any in the world.

It just now occurs to us that this letter was not intended for print. Will you not excuse us Mrs. M.? Remember you have a nation of sisters who are laboring against similar disadvantages.

STRAW MATS.

FROM *Vick's Floral Guide* No. 3, 1874, we extract the following: With many this is a month of leisure; of course the size of the mats will need some modification to adapt them to Bee Hives. Every body knows James Vick, of Rochester, N. Y., we suppose, if they do not they should at once send for his incomparable catalogue for 1875.

The straw mats, which we have referred to for covering the pit, are also very useful articles for the gardener in shading his forcing frames or protecting them from the cold in nights of early spring. These mats are easily made and one can employ his time upon them in very cold or stormy weather, when nothing can be done to advantage outside. In order to make a good article and to work to advantage it is best to employ a frame, such as shown in Fig. 1.

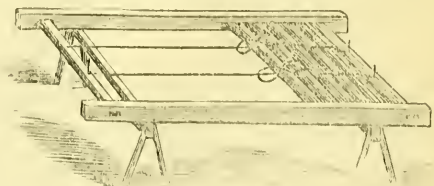


FIG. 1.

This frame may be made of two by four stuff for the sides, of the length required for the mat, and of two

transverse pieces morticed into them at the ends. Four feet will be found a very convenient width for the frame. This framework can rest upon a pair of wooden horses, about two feet in height, in which position the labor can be most easily performed. In the engraving we have shown only two strings, but a mat of four feet width should have at least four strings, which will make the spaces between about nine and one-half inches in width; closer tying than this even would be preferable. Screws are inserted at the proper distances on the cross pieces, to which the strings are attached. The straw is placed on the strings so as to have all the butts or lower ends come against the sides of the frame, with the tops meeting in the middle, and so thick as to have the mat not more than three-quarters of an inch in thickness when finished. The stitches should not be more than three-fourths of an inch in width. The tying string should be wound on a reel, and there should be one of them for each stationary string. The method of tying is shown in the illustration, Fig. 2. Take a little of the straw with the left hand and work the reel with the right, first over the straw and then under the stationary string, bringing it back between the two strings, pulling tightly and pressing the straw so as to have a flat stitch. In this way the work is continued until the mat is finished.



FIG. 2.

THE POISONOUS LAUREL HONEY OF VIRGINIA.

BY J. GRAMMER, M. D.

THE Nov. number of your GLEANINGS, for which I wrote some time ago, was promptly received, it has been read from beginning to end, advertisements and all. I was aware the art of Bee culture, like everything else in the present age, had been brought to a high degree of perfection; but the extent to which it really has been carried, the number and variety of the appliances used in it, and the success which it has attained have struck me with great astonishment.

Your correspondent, writing from the Shenandoah Valley, seems to think that he has come to understand "the matter thoroughly" in regard to "Virginia wild honey," but he is still rather in the dark. It is true that wherever the mountain Laurel grows, the bees are very fond of it, but "Laurel honey" is not confined to the *wild* bees, for the tame ones will also resort to the flowers, and it is dangerous, for any one unable to detect the taste, to eat the honey. It has a highly poisonous effect, being an extremely distressing narcotic, varying in its effects in proportion to the quantity eaten. During the war, as a Surgeon in the Confederate army, and campaigning a good deal in the Valley (as we call it) I had many opportunities of witnessing its effects, and on one occasion, personal experience gave me the right to say that I know something about it, as well as your correspondent. He says he only *tested* it, but not being forewarned, or rather, not being acquainted with the taste of the "Laurel honey" I ate a small quantity of it, and was prevented by the disagreeable taste from eating more. My comrades, equally ignorant, and not quite so fastidious, indulged more freely, and consequently suffered in proportion. I do not remember very distinctly the symptoms, but as nearly as I can recall them, my sensations were these: Some time after eating, a queerish sensation of tingling all over, indistinct vision, caused by dilatation of the pupils, with an empty, dizzy feeling about the head, and a horrible nausea that would not relieve itself by vomiting. In my case this lasted perhaps an hour, but my companions were worse off, and complained of the symptoms two or three hours. They however had not eaten enough to suffer as much as I have seen others. The first case or two that I saw were entirely overpowered by it, and their appearance was exactly as if they were dead drunk, and I should certainly have pronounced them so, had not their messmates assured me to the contrary, and had I not discovered that they were rational and sensible of their condition, as shown by their imperfect efforts to articulate. To speak technically, the innervation of all the voluntary muscles was completely destroyed. The use of the usual remedies, or antidotes for narcotics partially restored them in a few hours, but the effects did not entirely wear off for two or three days, and I was assured that fatal consequences have been known to follow a too free indulgence in the sweet but treacherous product of the "models of industry."

Where there is no Mountain Laurel to poison their honey, the wild bees of Virginia can make as good

honey as any others. Of course the quality of the honey varies with the character of the flowers from which it is made, and I have seen as good honey from a bee tree on the edge of a field of clover as perhaps the bees of Hymethus ever made.

If the Shenandoah Valley be such a fine country for bees, I am satisfied that this region will be much better, for though the soil is not so productive of cereals etc., the variety and abundance of wild flowers is much greater, clover grows very well and the climate is several degrees milder. Bees here are never sheltered in winter, and I do not remember ever to have heard of a colony being destroyed by cold weather.

Hallifax C. H. Virginia.

[For Gleanings.]

WINTERING AND "NEW IDEA HIVES."

BY JAMES HEDDON.

DEAR EDITOR:—Our experience has taught us that a wall of saw-dust *will* (if made thick enough) protect bees from cold equally as well as any cellar. We have such a house that cost us not to exceed \$25.00 out and will not its convenience, when compared with a cellar, pay the interest on the cost, annually? We think we have learned that when bees are housed in a reasonably warm place, that the less upward ventilation they have, the better. Are experimenting on the above last named point again this winter. Is not a house drier than a cellar? Our house works to a charm, giving us good control over the temperature.

1. Put your bees in their winter abode, in such a manner that they will not know they have been moved. In my opinion this is THE great, and as far as I can see, only advantage out-door wintering has over the house.

2. Give your bees every good opportunity to fly, that is afforded, throughout the entire year, when they can possibly be benefitted thereby.

3. Do not suffer your bees to remain for any considerable length of time, in a temperature of 32° F. or below, during winter or spring.

I think I should have lost one-half of my apiary, last winter, or rather last spring, had I not have carried them in and out many times, and that too so noiselessly that they never knew it. As it was I lost but one, and that one was "lost" (Queenless) the fall previous.

"But how" am I to do all this practically? Put your bees into small hives, which you will find the most profitable in the end, both summer and winter. I make all my hives of $\frac{3}{4}$ lumber (dressed on both sides) except the rabbeted end pieces, which are $\frac{1}{2}$ inch thick. Don't fail to use a tight bottom, if you expect to "get your bees into the repository without their knowing it," and that too easily, and without a lot of dirt, rubbish etc. If you use any floor to your bee house, other than "Mother earth" place about two or three inches of saw-dust on it, that you will have no need to go about "tip-toeing." I place mine on shelves, arranged a la Noxie, and also have about an inch of saw-dust on these. Now as my house door is not farther than about 10 feet from the farthest hive, I can easily place every one of my 55 hives in their respective places in a single hour, all alone, and so still that only about—lets see—I believe six stocks, through carelessness did seem to know that somebody was around. With this arrangement, you will not put off putting in your bees "for fear winter has not come yet" until the hives are all wet and snowy, as it will be easy and no drawback to the bees to set them out—should you have a second Indian summer. After setting your colonies out in spring, and when old Boreas threatens to visit us again, you will not entertain any accommodation theories, that "I guess it won't last long," but go and put them right back again. Treated as above I have no fears that I shall not take out as many live stocks as I put in, in good order, provided however, that some epidemic does not steal through the ventilators, and perhaps "sweep clean."

Mr. T. F. Bingham, one of Michigan's most successful Apiarists told me last spring to "notice if my small colonies not store more honey in proportion, than my large ones," offering that they would. I did give this point special attention and found it as he stated, and as far as extracted honey is concerned even down to a tea-cupful of bees.

Dowagiac, Mich. Dec. 1th, 1874.

While we are prepared to warmly indorse most of the above, a few points we think are open to grave doubts, viz: can a house be kept cool as well as a cellar? Is a freezing temperature necessarily deleterious? Can hives be

carried out so silently that the bees will not fly out? or are they to be confined the while? Lastly are we to go back so far as to entertain the idea that *weak* colonies gather more honey in proportion than strong ones? Friend H. we are afraid your judgment is a little—no, no, we won't argue, but we will all observe carefully in our own apiaries the coming season. Saw-dust on the shelves and floor is a glorious idea, and many can use it during the coming spring. Thanks.

Obituary.—R. C. OTIS, who is well known to the bee-keeping fraternity, died Aug. 31st, 1874, at Mount Pleasant, Iowa, in the 61st year of his age.

M. M. BALDRIDGE, St. Charles, Ills. Jan. 14th, 1875.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS

MEDINA, OHIO.

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[Including Postage.]

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MEDINA, FEB. 1, 1875.

WHEN we "call again," we will tell you of the many things want of space only, forbids our telling now.

A. B. J., on good time, *World*, on the 12th, and B. K. M., not until the 18th.

QUINBY offers a six frame hive complete for \$1.75. Send for his new circular.

W. W. BIRD, Freedom Mills, O., offers a beautiful material for smoking bees for \$10.00 a cord.

THE great Honey men of York State meet at the Butterfield House at Utica on the 3rd and 4th of Feb. 1875. M. Quinby, President, and J. H. Nellis, Sec.

A. B. J., and B. K. M., have both advanced their wholesale rates so much that we are obliged to raise our clubbing rates to \$2.50 on the former and \$2.00 on latter, and \$5.00 once more for all, after this date.

WE certainly shall have to beg pardon of our English Consignees. There is a British Bee Journal, and it has a Novice, Metal Corners, Simplicity Hives, Quilts, and even a Lamp Nursery. More anon. Thanks are due friend Murphy, of Fulton, Ills., for back No's.

FRIEND Elwood omitted to carry out his figures in his report last month and unfortunately the task devolved on Novice just at a time when he had been working all day, and nearly all night too in his zeal to give you all your papers promptly by the first of the month as usual. He only made *two* blunders, and both on the safe side; the report should foot \$3310.12, instead of \$1872.10.

HONEY BEARING PLANTS.

A FEW WORDS ON THE SUBJECT BY PROF. KIRTLAND.

THE plant inclosed, is the Chick-weed (*Stellaria media*) of Botanists, a native of Europe, introduced and now common everywhere, especially in rich garden soils, where it becomes a nuisance. It is either an annual, or a biennial, very hardy, may often be found in flower even in the winter months; wherever the snow melts away the little star like flowers appear. They, with the English snow drops (*Galanthus*) and the *Daphne mezereum* are the first flowers in my garden, in the month of March, to attract my bees away, from their supplies of Indian meal, Rye flour or ground Linseed cake. These plants are all Foreigners and when introduced into our garden put forth their blossoms earlier than any of our indig-

enous plants. *Vid. Dr. Darlington's American Weeds and useful plants, page 59.*

The investigation of the merits and intrinsic value of Honey-bearing plants, is an important matter; and I am much gratified to learn that you are directing your attention to it. From the year 1810, down to the present moment, it has to some extent, occupied my studies, and been the subject of experiment, and observation. If at any time my suggestions will be of service to you, they will be rendered gratuitously with pleasure, *provided* the infirmities of advanced age and ill health do not interfere.

At present, it is somewhat problematical whether any species of the vegetable kingdom can be profitably cultivated, on an extensive scale solely for producing honey.

Many years since, my friend Biemiller, of the Zoar Community, in Tuscarawas County, showed me a field of several acres, thickly covered with the Rape plants, then in full bloom, and swarming with bees, from his extensive and well arranged Apiary. Besides the bee feed they supplied, their seeds were manufactured into oil, which at that day, together with corn oil (Fusel oil of the distilleries) furnished the supply for lights, extensively in the West. He thought that for this double purpose the cultivation of the Rape was profitable. The Ohio Canal was then in progress of construction and Whale oil was not brought into the State. Lard oil was not thought of; and Petroleum had not entered the imagination. Besides Fusel oil, at that the *Burnce*, has since, by the appliances of the Distiller's art been converted into the *Burnor*, and is now the main element of poison in modern whiskey, that burns out the mucous coat of the stomach and irritates the brain of the inebriate into Delirium Tremens.

At this day the cheap supply of Petroleum renders Rape of no value as the furnisher of a burning oil, hence its cultivation for its supply of bee stores would not perhaps pay.

In my belief the true Chinese Mustard holds out the best prospects for this purpose of any plant at present known. It is the *Sinapis Chinesensis* of Don's Gardeners Dictionary, Vol. 1, page 249.

Twenty years since, I found it cultivated in a gentleman's garden in Northern Indiana for greens and salad, and five years since I found it in a Jew's garden, at Volusia, on St. John's river, Florida, where it was used for the same purposes. It produces more than double the quantity of flowers and seed than either the black or white mustard, the species usually cultivated in this State. The last named is too frequently sent out from our seed stores as the Chinese. If patches of ground be sown at suitable intervals of time from early spring, till near the close of summer our bees will be constantly occupied in collecting honey during those periods when they are usually idle for the want of such supplies, as will be thus furnished. The seed of this kind is peculiarly adapted for grinding into the popular condiment; always commands a ready market and good price, and will insure sufficient income to repay for its cultivation.

From causes alluded to, I am a retired member among Bee-Cultivators. Two years since I reduced my Apiary from 100 to 10 stocks and this small number I have hardly strength to manage.

I am further gratified to learn that you are successfully and essentially simplifying the structure of the hive. The Honey bee would require enlarged capacities to comprehend the labyrinths and mysteries, involved in many of the modern patent hives.

With great respect, Yours,

J. P. KIRTLAND.

East Rockport, Cuyahoga Co., O. Jan. 19th 1875

The specimen of Chickweed referred to was sent us by a Southern friend whose name we have carelessly lost. We failed to recognize it on account of extra size of both leaf and blossoms. If we remember, bees were busy on it in Dec. We think the oil from Rape seed is quite in demand just now, for some purpose; will some one inform us in regard to it? Our bees are very attentive indeed to the common mustard, and we hope to give the Chinese a trial this season. We feel sure our readers all join us in tendering thanks to our venerable teacher for his kind offer of assistance. Plants to be named had better be mailed to us. Send a pressed specimen of the stalk with leaves attached, and if possible the flower also. Those having Botanics, will find them great aids in investigations.

TO GROW CATNIP TO BLOSSOM THE FIRST YEAR FROM THE SEED.

Sow on clean rich ground any time in Feb. or March, one ounce of good seed for 10 square rods. Sow broad cast and pull the weeds in the early part of the season. But the most profit will accrue from it after the first year, by transplanting on rich ground in rows three feet apart, and cultivate. The transplanting would be better done in the fall were it not that the freezing and thawing of our stiff clay lands during winter heaves the plants all out on the top of the ground. I lost several thousand plants in this way last winter.

M. NEVINS, Cheviot, Hamilton Co., O.

As Mr. N. is the pioneer in Catnip, and also the only one offering seed from *cultivated plants*, we think he should be patronized. See his advertisement in Sept. No., Vol. 2.

WHY DOES HONEY SOUR ETC.

BY CHAS. F. MUTH.

DEAR NOVICE:—In your remarks on my article on Out-Door Wintering page 139 of Dec. No. of GLEANINGS you express your opinion that a small swarm would accumulate mould where a large swarm would not, and that a large swarm would get along with unsealed honey when you would fear for a weak one. I differ with you and shall try to give you the points, wishing to be corrected if I am wrong. I have told you that the top protection of my hives in winter is a straw mat. My combs don't show any mould whatever. I pay no attention to my combs being capped or uncapped and I can show any one that no mould accumulates with the weakest one of my swarms. My honey does not get sour in the cells nor in open vessels in my store. But I have a cellar, in one damp corner of which stood since last season a 2 gallon stone jar filled with honey, well covered up. Barrels had been rolled in front of the jar, and when it turned up again, a few weeks ago, the honey was completely sour. If this jar of honey had been standing in a well ventilated room, it would certainly not have soured. Don't you think so? Cannot we apply the same rule to bee-hives?

The weakest one of my swarms may eventually freeze out, but I am sure no mould will accumulate, no honey will sour in the hive even if every comb was uncapped, and I may add I will have no dysentery among my bees. The necessity of an upward ventilation is shown very plain if one lays the cover of hive flat on the straw mat. In less than two weeks the mat is so mouldy (when the swarm is strong) that one can not see the sewing twine. The mat is mouldy all through, and smells like foul straw. The combs are mouldy and the bees are in a fair way of getting dysentery if it only keeps cold a little longer and they have not plenty lower ventilation. The air of the hive is unhealthy for the bees and their honey is souring for the same reason my honey soured in the cellar, only that the souring process was hastened on in the hive by the heat created by the bees. The unhealthy air in the hive is generally the cause of dysentery, in my estimation, but not the cold weather nor the late collected honey. And the straw mat is good for nothing if you don't allow an air passage above it.

India-rubber is a much better non-conductor than woolen cloth, and clothing of the same stuff would keep us very warm but it would be an unhealthy heat because India-rubber is no absorber. The straw mat is an absorber and a poor conductor; with it on top of the frames and an air passage above, the air of the hive is continually renewed without admitting a cold draft.

Cincinnati, O.

Very good so far as *dysentery* is concerned, but in the late "spring" troubles the bees die off, with dry clean combs and no symptoms of this difficulty. Such at least was the trouble in our own and neighboring Apiaries. No unfavorable report has ever been received of the mats. How late in the spring do you keep them thus friend M.?

REPORT FROM P. H. ELWOOD.

Continued From Last Month.

I THINK a good market for extracted honey can be established as "scientific" suggests in *A. B. J.*, in any farming community, for we shall dispose of nearly a thousand pounds here at home without try-

ing to sell a pound. Very much will depend however, on the quality of the honey. When properly ripened and preserved it will be equal to box honey in flavor and superior to it in consistency. Large quantities of that now offered in market is unfit to eat.

It has been very difficult to control swarming the past season and we were compelled to make a hundred artificial swarms. In a few cases, after-swarms have left taking the last young Queen from a hive, and therefore leaving it hopelessly Queenless. In one case the last Queen left when all Queen cells except the one from which it hatched had been destroyed a week before; it was a good swarm and had plenty of room for comb building and storing honey.

We have now 275 colonies, 250 in good condition, 25 fair. Fed but one barrel of sugar as the most of the swarms were well supplied with good honey. Two-thirds of our bees are out of doors where they wintered best last winter. The remainder are in a bee-cellar similar to the one recommended by Novice in last GLEANINGS. The temperature remained very uniform in it last winter and some slight changes have been made for this winter which will make it still better. I think those boards Novice nails to the inside of rafters will be pressed off by the weight of earth and snow above. [But we said cover the earth with a good shingle roof—Ed.]

The following is a record of the only swarm we kept a tally of. It will show when the most of our honey was gathered. The extracting was done evenings up to Aug. 11th. No account kept of cappings and fractional pounds.

June 29th, 5 lbs.	July 23rd, 58 lbs.	Aug. 5th, 72 lbs.
July 4th, 11 "	" 25th, 57 "	" 8th, 46 "
" 8th, 30 "	" 29th, 65 "	" 11th, 62 "
" 16th, 31 "	Aug. 1st, 65 "	" 17th, 43 "
		" 26th, 37 "

Total 582 lbs., all white except last 50 lbs. Basswood commenced about July 20th, and lasted until second week in Aug. No additions made to this swarm. No stimulating in spring. Wintered out-doors in Quinby hive. Weight of bees Aug. 5th, 14½ lbs. If empty there must have been ¾ of 100,000. As a part were filled with honey 50,000 bees I think would be a fair estimate of their number. This number is not equal to that sometimes given to swarms from estimates of brood, but we had but two or three Queens that surpassed this, and that but slightly. The mother of the Queen in this swarm is a pure Italian, producing Queens of uniform prolificness and good color. They will average nearly as prolific as the one I have mentioned and we have two or three that will, as stated above, slightly surpass her. None of her grand-daughters are black. I shall have none of this stock to sell but will try and get Mr. Quinby to raise a few Queens if any want them. A common objection to the Italian bee is that they are poor wax workers and do not work well in boxes and that combs after sealing have a watery appearance. This objection, so far as my limited experience goes, does not hold good with this family of Italians; they work in boxes as well as the blacks. But they are those "light colored Italians," I hear some of your Western bee men say.

All of our bees are in the Quinby hive and after another season's trial I like it better than ever. Do little says one man can care for a hundred swarms when run to box honey. I am not disposed to question the truthfulness of this statement with the majority of hives in use, but with the Quinby hive a man should take good care of two hundred colonies. And I am backed up in this statement by one of the most successful honey producers in America. That so successful an Apiarian as Capt. Hetherington should have discarded the hanging frame and at a cost of several thousand dollars transferred his bees to the Quinby hive, is a fact well worthy the attention of such men as the Rev. W. F. Clarke, who, (judging from his results) condemns the hive before he has learned how to manipulate it properly. One day in the latter part of June I visited an out-yard containing 60 colonies. I arrived at 10 o'clock A. M. and came away at 5 o'clock P. M. While there I took apart every hive, took off all the quilts and panels, put on the honey boards, took from each case twenty-four two comb boxes, where they had been piled promiscuously for convenience in moving, replaced them in proper position for filling, besides spreading the brood nest in five-sixths of the hives. This was accomplished with the loss of as few bees as with any hive with which I am acquainted not even excepting hanging frames with that almost indispensable attachment, *tin corners*. And I venture the assertion that Queens were in less danger of being killed than in any hanging frame hive in use. I mention this operation mostly for the benefit of those who seem to think that it spoils the best part of a half day to open and close a Quinby hive.

P. H. Elwood.

Starkville, Berk. Co., N. Y. Dec. 17th, 1874

Reports Encouraging.

WE think it now demonstrated beyond a doubt, that bee-keeping on the average pays well; at least *our* subscribers are sending very cheering reports. That our new readers, of which we have a large number, may see that these large crops are not confined to any particular locality or persons, we submit the following reports:

I got 1400 lbs. of honey this year from 23 stocks, part of them weak in spring. Have 25 now.

M. H. MILSTER, Frohna, Perry Co., Mo.

From a strength of six stocks last spring I got 400 lbs. beautiful thick honey and increased them to 18 stocks.

REV. JOHN FOTHERINGHAM.

Woodham, Ontario, Canada.

I had one stand of Italians in the spring, increased 1, and about 50 lbs. box and frame honey. Bought two stands of bees from Mr. Nesbit, Cynthiaana, and rec'd them in good condition.

WALTER SENIOR.

Evansville, Preston Co., West Va.

The past season in this vicinity was considered a very poor one by all who use the old box hive. My bees averaged 75 lbs. per hive, extracted. I am taking 44 swarms through this winter. I took from one swarm 238½ lbs. last season. Have not tried raising box honey yet, but shall another season.

M. E. McMASTER, Shelbyville, Mo.

I use all Langstroth hives with ten frames and have all half bred Italians. I had 25 swarms last winter and lost them during the spring down to 12, and increased them through natural swarming during the summer up to 34 colonies and got over 1000 lbs. of box honey and 150 lbs. of extracted honey and sold it all from 20 to 25c a pound.

JOHN ROLLER, Waterloo, Wis. Nov. 26th, 1874.

I wintered 70 stocks last winter. I used the honey extractor on 10 commencing July 9th, and extracted 1800 lbs. of honey while the basswood was in bloom. I took from them 810 lbs. in eight days. From my best stock I took 120 lbs. in seven days, during the season I took from the same stock 210 lbs. While from my best stock that was working for comb honey I only took 80 lbs. during the whole season. I am trying to winter now 80 stocks.

E. BROWN, Port Rowan, Can.

I have 81 swarms of bees and they all appear in good condition. I winter on summer stands, have never lost more than two per cent in wintering. I had about 2500 lbs. of honey to sell this season besides what I kept for my own use, could have had more but had the misfortune to break my arm in three places one year ago to-day and I have been pretty badly crippled and could not have help as it is impossible to get a man to be p.m.e, my wife is my only help.

GEORGE LARRATT, Winnamac, Ind. Jan. 4th, '75.

I commenced last spring with 25 stocks of bees, half of them were rather weak, the season was rather a poor one, clover and buckwheat were a failure yet I averaged 140 lbs. of basswood and golden rod honey, about four-fifths of it was extracted. I increased to 50 stocks. It seems that few if any have averaged 100 lbs. of comb honey from an apiary of 50 stocks or more. I think I can average that next year with my improved hives and section boxes. How many will average more than 100 lbs. and double their stocks?

R. S. BECKTELL, New Buffalo, Mich.

CALIFORNIA.

In 1873 I commenced in a mountainous region of this County with 43 common box hives; these increased to 93, and made 10200 lbs. of honey and 230 lbs. of wax. I sold honey at 10c and wax at 25c. In 1874 I started with 93 hives and increased to 182 by natural swarming; 25 of the first swarms I put in Langstroth hives, 18 frames, 15½x19½, inside measure, and I extracted from these on an average, 310 lbs. each during the season. I made altogether 22600 lbs. of honey and 610 lbs. of wax and sold the honey at 9 and 10c per lb., and wax at 26c. Bees are working here the whole year except when it is raining. The principle honey harvest is from middle of April till the middle of July, and the swarming from middle of March till about the first of June.

P. PHILLIPS, Los Angeles.

[For Gleanings.]

VARIOUS MATTERS.

BY G. M. DOOLITTLE.

FRIEND NOVICE:—Please read our weight 253 instead of 243 lbs., also in next to last line of post script read jarring instead of joining. We think you have hit the nail right on the head in regard to dysentery being caused by getting bees too warm. We venture the assertion that cold never caused dysentery among bees where they were properly ventilated so as to get rid of all the moisture from the combs and still not cause a draft of air through the hive. We have tried to kill a swarm of bees by taking all covering off of the top of the hives and raising the hive six inches at the bottom with a temperature of from 2 to 10° above zero and we could not do it with an experiment of four nights in succession. [We have just made a similar experiment. Bees all right.—Ed.] Bees kept dry, will stand any amount of cold we get in this latitude but wet them with the mercury at zero and they perish at once. We had the privilege of seeing some bees last Feb. kept as Quinby recommended a year ago, nearly at a temperature of 50° and we never saw dysentery in its worst form before. The hives were smeared so that the filth dropped from them. You ask why not keep the packed straw on the hives all winter? Simply because it keeps them too warm. [Leave 'em out-doors then.—Ed.] We tried it one winter and every day when the mercury would rise to 32° they would get uneasy and cover the whole top of the hive, gnaw the quilt and consume four times the honey they otherwise would. We came near losing a part of them with dysentery but finally took off the straw and all was right after a few days.

Our honey boxes are made to take a 5x6 glass and hold when filled about 2½ lbs. They are arranged so that the glass is not put on until they are filled. We prefer side and top boxes both yet a part of our hives were like Gallup's standard hives and could be only top boxed. Bees will build comb much the fastest at the sides and store their honey at top. Get them to work if possible in the top first and when the top ones are filled raise those from the sides which are nearly full of comb to the top putting empty ones in their places and so on as long as the honey season lasts. Do not let them finish any on the lower tier at the sides for if you do it will be stained so by the bees passing over it as not to be salable. But Novice why ask us any thing about box honey, etc., as, "certain parts of York State have this season produced great results yet for three seasons previous they have not reported at all or at least but little worth mentioning." As this has been the first year we have given an encouraging report probably it will be the last but had you not forgotten that we reported 80 lbs. (box honey) per hive as an average last year?

Borodino, N. Y. Dec. 14th, 1874.

True friend D., you, *co* report we believe and we beg pardon, but how about the rest?

MOTHERWORT FOR HONEY.

ALITTLE over two years ago I bought an old place of about two acres, rebuilt, fixed up etc., and last spring I took it into my head to buy a swarm of bees. In a short time I had two hives; it being a new business and a novelty to me, I began to take great pleasure in seeing the little fellows work and talk among themselves. It so happened that my place had on it plenty of catnip and above all, it has Motherwort. Now there was nothing that pleased the bees so well, as long as it lasted, as the Motherwort. They were both in blossom at the same time, and the blossoms are very much alike, but there was not a bee on the catnip, where there were hundreds and I might say thousands on the Motherwort; I walked about among it, and they seemed to take delight in following me and thanking me for the kind protection and culture of the plant. It was funny to see the little fellows play backwards and forwards to their homes, so highly pleased. Now you can't talk catnip to me when there is Motherwort around. It possesses some good medical properties and I am led to believe it is invaluable to the human family. I intend to increase the crop ten-fold next spring, and I am in hopes to write next fall that I have 20 hives instead of 2. The business is new to me, but I think I will like it more and more as I progress.

DR. R. HITCHCOCK, South Norwalk, Conn.

The glass cutter advertised in this No., cuts beautifully. We have used one considerably.

Heads of Grain, FROM DIFFERENT FIELDS.

MR. ROOT, DEAR SIR:—Please tell us as near as you can, just the condition that a colony should be in when the boxes are put on, how early in the season, how many to a time, how many frames left in the brood nest, if upward ventilation is essential to storing in boxes? Our bees would store their honey in the brood nest instead of boxes; would not the colony dwindle down too weak for winter, if an empty comb was not occasionally inserted in the centre between brood combs, and would not the inserting of an empty comb draw the bees from the boxes? if not too much trouble we would like very much to have you make it plain to us, just the condition of a colony, and how to manage them in getting box honey; how to get extracted honey seems very plain but we want some box honey as some persons will only buy comb honey. SARAH J. W. AXTELL, Roseville, Ill. Dec. 29th, 1874.

We have just drawn a long breath preparatory to telling "just how to manage to get box honey." Ahem!—It just now occurs to us that we had better ask Mr. Doolittle or some of his neighbors, and upon further consideration it occurs to us that *we* don't know. Getting extracted honey as you say is a very simple matter, and any one can learn to do it in even the poorest season. Our experience has been that when you get your colony built up strong, and they have got all their combs pretty well filled with honey, bulged out with lengthened cells over brood, etc., that it is time to put on the boxes. If the boxes are close, and no openings are left for the warmth from the cluster to escape, the bees will soon occupy the empty space thus furnished, especially if the weather is favorable and good sized guide combs are provided. Many times however, they will waste time enough before accepting the boxes, to have gathered many pounds of honey had the extractor been used, and in fact we have never seen comb honey produced in any shape, without, what looks to us like, very poor domestic economy inside the hive. When the extractor first came into use, we fondly imagined that we should have much stronger colonies to go into winter quarters, because the Queen would have so much more room for brood; for some reason unknown, such does not seem to be the case in the majority of instances. Perhaps the queer malady that has so depopulated our hives in winter and spring, of late, may be one reason. We believe we shall have to admit that black bees, in box hives, have been more populous in the spring of late, than our Italian stocks where the extractor has been used. Many hasty conclusions have been drawn as to the reason of this and we think it best to "go slowly" in the matter.

A few days ago one of my swarms left the hive (plenty of honey and in good condition) swarmed around awhile (twas quite warm) and returned to the hive. Near night I found a knot of bees at the entrance and of course the Queen in the middle. They had gnawed both wings off and even her sting seemed to be gone, though she was alive and after caging seemed lively but died next day. Please tell me why they did so and what to do. W. F. LEWIS, Baldwin, Miss. Jan. 1st, '75.

We imagine it will be quite difficult to account for all cases of this so called swarming out. It evidently arises from a discontented disposition engendered by some deficiency or disagreeable feature belonging to the interior of the hive. For instance want of food is the

most common cause, and it is well known that bees have been in the habit of deserting their hives both in fall and spring, for centuries past, for this reason. It is only of late years, we believe however, that they have taken to deserting hives well supplied with stores, and these cases we think will be found to result from a variety of causes; the principle one, in our opinion is only to be explained by considering the losses of late years the result of a disease; and that colonies thinned down in numbers, and utterly demoralized and discouraged, swarm out with the vain hope of throwing off old and painful associations, and taking a new start. This will satisfactorily explain why such losses occur in Southern climates as well as in the North. On the ground that "Satan always finds some mischief etc.," we should prescribe as a remedy that when this gets to be the fashion, they should have a good "feed" to keep them busy at home, until they had got over the notion, for they almost invariably, when put back, come out again if the weather seems enticing. Attacking their Queens and killing them, so far as we can see, can be explained on no other hypothesis, viz: a diseased and unnatural state of affairs in the bee hive. Our friend Miss Annie Saunders, of Woodville, Miss., writes in regard to the latter trouble:

I think I can convince you that *my* bees killed their own Queens last spring. The circumstances were such as to forbid any other hypothesis. They fly all the year, so do not have your spring setting out to confuse them; the mischief was done before extracting commenced, therefore it could not have been from shaking them where they got into the "wrong box"; none of the unfortunate hives were so arranged that such an accident would have been likely to occur, only one being less than twenty feet from neighboring hives and I always keep each little door-yard perfectly clean, so I do not think my bees had a shadow of "a peg" on which to hang an excuse "for intruding on each other." Nevertheless they killed five of eleven of my last years Queens, and two young ones.

Once in having a natural swarm, during the prevalence of the matriclidal epidemic, I used a glass hive and so saw the bees trying to kill their Queen before they had fairly entered the hive. She was a beautiful young Italian, laying too, and had not the slightest defect that I could discover. In most of the cases I thought the Queens were killed because they could not or would not go, when the bees wanted to swarm. Not one had been introduced during the spring, the two young ones were hatched with those same unnatural bees that murdered them.

Now is it not unkind, to say the least, to tell Miss Annie that all this trouble was the result of her own carelessness? In some cases it may be that a lack of pollen brings about this discontent (see page 141, Vol. 2) but we think we have many cases where even this will not do for an explanation. All the advice we can offer is to keep them busy with brood, feed etc., and to have them always neat, clean and nice, just as Miss Annie says she *has* kept her bees. We advised friend Whitson to try feeding to save his Queens last spring, and it succeeded perfectly; see what he says about it on page 70, Vol. 2.

My bees are doing well in the ice house. [See page 14, Vol. 2.] I think one colony Queenless but they are strong and cross as need be. What can I do to save them before spring? L. M. RAUB, Bolivar, N. Y. Dec. 11th, 1874.

Nothing until you give them a fly, then give them a comb containing eggs from some other colony. Repeat this as often as is convenient until they can rear a Queen in the spring. See page 90, Vol. 1.

My objection to the Quinby hive is its size—it is unwieldy and a great task on an old man's strength to handle it.

W. S. LUNT, Fostoria, O.

Very true; and yet a muscular young chap like our friend Elwood might handle a much larger frame with rapidity and ease. Guess we *shall* have to have two sizes of frames if not more. It seems to us that Mr. Q. puts much more lumber into his frames, than is by any means required.

HURRAH FOR RAPE AS A HONEY PLANT!

We sold quite a quantity of Rape seed last season and were beginning to fear we had only aided in bringing disappointment as we have not before that we can now recollect, had one single favorable report, in fact we have had scarcely a report of any kind. Our own experiment only demonstrated that it was a most excellent grasshopper "feed," for they stationed sentinels over the whole patch and as soon as a rape leaf tried to "come up" it was nipped off in a twinkling. We can until further notice mail the seed at 20c per lb.

FRIEND NOVICE:—I bought 3 lbs of Rape seed from you last spring and give it to Mr. C. W. Driscoll, Wyoming Co., N. Y., to sow. He sowed $\frac{1}{4}$ acre of it and he says that he received \$25.00 for the honey from it, which was sold at 25c per lb. *net weight* cutting the comb from the boxes, the boxes being old and not salable. This honey was gathered by 3 stocks and their increase. He received more surplus honey from this patch of Rape than from any other source. He is so well pleased with it that this year he is going to sow 6 acres, 2 acres at three times, the seed was not properly harvested but as I understood him to say, it pays him as well if not better than any other crop, besides the honey gathered from it. When the bloom was at its height it was one perfect hum with bees, giving honey not only to his own bees, but about 50 or 60 other hives belonging to neighbors. I have seen no reports of Rape or late in GLEANINGS or A. B. J. I wish subscribers would give more reports concerning it. How has Rape succeeded with you? The honey from Rape sells as well as that from white clover, and to my taste it has a better flavor. I would like to see a report from Gallup. How has the long hive done with you this last season? I would like to know from Doolittle if he uses any side stores, and if they are as good as top boxes? I would like some one to give a report regarding Mellilot clover, how it was cultivated and whether it has any other value than as a honey producing plant. Can any brother bee-keeper give a report of Rapp (the winter variety of Rape)? Did you sow any Vetches and were they of any value? Has any one tried Esparcet? What hive does Harbison use?

JOHN H. UMPLEBY, Buffalo, N. Y. Jan. 11th, 1875.

Mellilot clover is a bad weed, and is only now and then visited by the bees in our locality. It will undoubtedly grow "its own self" when once started, for if you want an appetite for dinner you need only to commence at 11 $\frac{1}{2}$ o'clock to pull one up. We sowed some six years ago in our garden, and they still, "stand by us." The "Sweet Clover in the hull" so diligently advertised by the B. K. M., is from the same original stock. About Vetches, see Vol. 2, page 94. Will Mr. Harbison himself, or some of our subscribers, in California, please tell us what hive he uses?

I have had only one year's experience, and am very fond of the "little critters," and do love the honey.

NATHAN KERHART, Osceola Mills, Pa.

I was Italianizing my stock last summer, some of them by removing black Queen and giving Queen cell. A few among my strong stocks I treated thus and had their young Queens just hatched out as white clover was doing its best; these stocks of course had no brood to feed and they gave me honey largely in excess of those full of young brood though equally strong. As the light of clover yield only lasts from ten days to two weeks after which there is next to nothing for them to get for awhile, an increase of bees just at this

time is not desirable, unless for dividing or Queen rearing. I think I can turn this knowledge to good account.

CHAS. H. RUE, Manalapan, N. J.

Very true; "Our Beautiful Experiment", page 90, Vol. 2, is on the same plan, but brood must be reared at some future time or the colony will go down in numbers. It may be advisable but we have our doubts.

Have just put my 89 colonies into winter quarters. They weighed as follows: Twenty at 66 lbs. each; 32, 75 lbs. each; 10, 80 lbs.; 15, 85 lbs., and 22 at 100 lbs. each. Average weight of the hives, 33 lbs. each.

N. C. Mitchell was to see me, he says that I may write on each hive, dead. I say not one unless it is Queenless. I say for success, strong in numbers, and rich in stores.

ADAM BARR, Rollersville, O.

Sandusky Co. Nov. 10th, 1874.

We should say that 33 lbs. of honey, net, per colony a great plenty; however we should be very glad indeed for a report of the above apiary next spring. Be sure and tell us whether those having over 60 lbs. are in any way better, by June or July. Your extreme is a safe one, and Mitchell's advice can do no hurt, if you are very sure he did not contrive to get a way with any of your money. We have almost constant reports of him and it seems he still finds plenty of unsuspecting victims.

It is now the 28th of Dec., and yet we have scarcely had a day that bees could not fly, notwithstanding I see signs of disease among my bees. To-day in passing among them I saw the bees of one late swarm dragging themselves about the entrance with bodies much distended, some unable to fly and a smart sprinkle of dead bees around several hives. I commenced the season with nine stocks in tolerable condition increased them to seventeen, got 700 lbs. of honey all extracted, save 50 lbs. box honey; sold in county town for 20 cts. Bees mostly hybrids in common Langstroth hives; some in long one story hives. Like them much the best for summer, can't say as to winter. All have natural stores.

H. PEDEN, Mitchellville, Tenn.

We notice a similar trouble among our own bees, although the number of deceased is not large. It seems to affect about equally those out of doors, those in the bee house, and those in the forcing house, with the single exception of a hive purchased of a neighbor about 15 miles distant. This colony is very full of natural stores, but his bees have never had any disease. It stands in the open air. Was bro't us after our bees ceased working at the elder mill. Those who claim natural stores are never deleterious should read the Article on Laurel Honey.

Have you any worker comb in frames, partially or full of honey to spare and if so at what price?

J. H. IRWIN, Atchinson, Kansas.

Can no one supply this constantly recurring call for empty combs? If they are only properly cared for as we have directed in Vol. 2, a hive full should be worth \$5.00 even after the bees have all died.

Why are not eggs laid for drones fertilized the same as those for Queens and workers?

Because unfertile Queens and fertile workers lay eggs that produce drones in abundance.

Can you give me the name of the person whose theory is latest and most accepted on this subject?

We know of nothing, further than what is given in Langstroth's and Quinby's Books; in fact all that has been brought forward since, has tended rather to corroborate, than to overthrow their teachings. Just now, students who labor and practice, *with bees*, are in more request than theorists, begging your pardon friend J.

I will add a few items of general interest. Alcohol for cleansing propolis from glass in honey boxes.

Vinegar for cleansing gum from tube of a bee smoker caused by smoking tobacco and rags.

H. K. JONES, Parkersburg, West Virginia.

Thanks. Benzine is also a solvent of propolis and much cheaper but it may not be as desirable for this purpose.

The pleasure we feel in welcoming back our next friend, who seemed inclined at one time to desert us, is—have you never read in your Bible, dear readers of—Bless us! how soon these pages do fill up especially when we get a going, but we must just whisper, that, "curtains" are cheaper than "glass."

I did commence with seven strong stocks, 3 hybrids and 4 blacks. I did increase to ten. I do increase slow but sure; the ten colonies did gather about 1000 lbs. of honey, now how is that? Nearly all my neighbors did complain of a poor honey season. My bees are in the very best condition in the shed with the curtains down. The bees did fly the 10th of Nov. '74, when they had a good cleansing fly, then I put the curtains down again, and had them down up to this date of writing. During this time we had many sunny days with high winds when my neighbor's bees did fly and the wind did blow them in all directions while my bees were as quiet behind the curtains, as a sleeping child in the cradle.

D. N. KERN.

Shimmersville, Lehigh Co., Pa.

I put up 39 stands of bees for winter, about half a dozen of them have been dying off very fast since the last of Nov., no dysentery nor any thing else that I can see, only that they are dying.

D. G. HERVEY, Dunlap, Peoria Co., Ills.

I see you are not much in favor of the Quinby frame. Now I suppose there is a great deal in getting used to a thing. I have used them exclusively, with the exception of one hive in which I fitted frames crosswise, which makes the Gallup frame I believe, 11 inches square. Now in using the extractor I prefer to handle eight of the large, to thirteen of the small ones. They are not so very heavy—those which are entirely filled weighing only about 9 lbs. The small ones I think are best to build up small swarms but the large ones I think make the most convenient or best shaped hive for large ones.

My bees are wintering on their summer stands on buckwheat honey having extracted the white or early made. The bodies of the hives are banked with snow, with straw mats on top and the caps ventilated. I have just examined some of them. One Queenless stock containing about a pint of bees last Nov. and which I left on purpose to see how long they would last, have the dysentery quite badly and are about half gone. One more rather small swarm showed some signs of it; but the rest which I examined appeared to be sleeping quietly on clean combs. We have had two cold spells when the thermometer indicated from 10 to 15° below zero. The bees have not had a fly since November.

DANIEL HALL.

Warsaw, Wyoming Co., N. Y. Jan. 13th, '75.

EDITOR GLEANINGS:—A good house we all *must* have, for summer as well as winter use, and I have full faith that with this and proper precautions we may all safely winter. Mr. Bidwell claims that his cold frames are invaluable in saving bees during late autumn and early spring; during the warm sunshine in the interim of bloom. Grant his theory to be correct and a well constructed house will meet the case as well. For the last three years I have believed we keep our bees out too long, in Autumn, and remove from house too early, and have acted on the thought with entire success.

I have thought from my observation the past season, that worker comb could be acquired by the plan given by Mr. Stanhope in last number of Gleanings, page 11. Several of my colonies, as the result of an experiment, were Queenless in the honey season, remaining so till the brood was all gone. After supplying with Queens I had no drone comb made. I wondered if I had not discovered a way to get worker comb, and intended to prove the coming season, just what Mr. Stanhope has given us as a fact.

I have become a firm believer in stimulative feeding, the result of several year's experience. The fact or point suggested at our State meeting that uncapping honey in the hive was as well as interesting to me. Surely if we can stimulate as well by a little abrasion

of the comb in the hive, we have a cheap and easy method of accomplishing a good end.

A. J. COOK, Lansing, Mich.

But friend Cook could we keep the bees in their hives, if put into a *house* so early as the 3rd of Sept., the date Mr. B. put his in the cold frames? Could we keep a temperature low enough, without going below the surface of the ground? We are inclined to agree with you however in thinking that when bees are healthy, they may be kept six months safely without "a fly." An examination to-day, Jan. 18th, shows the 56 in the house to be in perfect health, and we can discover no difference in those having their quilts waxed down perfectly tight as they fixed them in Oct., and those with the straw mats; no trace of dampness is to be seen about either. Were it not for the two or three quarts of dead bees that we swept off the floor, nothing more could be desired. As we have said before dead bees are to be found also in the hives out-doors, and in the forcing house, but the latter being where it is light and warm, leave the hives before dying. The cider stores gathered may have something to do with this, but we cannot help thinking that keeping a *strong colony* warm or cold, giving them straw mats or quilts, keeping them in light or darkness, etc., has little or nothing to do with it, as there seems to be just about the same mortality under all circumstances.

In regard to worker comb building; if this be true natural swarms should build only worker comb for the first 10 days. Is this always the case with *heavy swarms*? Reducing the strength of a colony, according to Mr. Dean, always produces worker comb only, now in your experiments may it not be that the result was caused only because you *weakened* the colonies? Uncapping the sealed honey may answer as well, but we think it needs more practical verification, as does ever so many other points; our readers are just the cool headed, unbiased, and unprejudiced, men and women for the work. Eh?

The plan by which I succeeded last season in getting worker comb in the long hive was by keeping an empty space between the entrance and the cluster or brood nest. The entrance according to my experience, should be only in one end, the brood nest should be in the end farthest from the entrance; as the space between the entrance and brood nest begins to diminish, in the same proportion the bees are prone to build drone comb. A division board has the same effect and should therefore be dispensed with; 8 inches is, according to my experience, as near as the bees or honey should approach the wall of the hive, at the entrance end.

Will you please inform me if molasses barrels can be cleaned sufficiently to use in marketing extracted honey? A. M. SREED, Front Royal, Warren Co., Va.

This is a matter in which we have had no direct experience. Can any one give us more light on the matter. If you wash your barrels clean, and then "wax 'em" when dry, they will certainly answer we think.

I wintered my bees in a small cellar only 15x7, average temperature about 40°, did not lose any. They were nearly all very strong when set out in the spring and did not reduce down on account of cold weather. My hives hold nine combs, 12x14. It was so cold I did not raise Queens in time, so I allowed natural swarming; first swarm came out May 21st; 30 old swarms increased to 58. Extra combs built and on hand now 105, cap honey 132 lbs., ext'd 2007 lbs., in large combs 300 lbs., in all 3709 lbs. I had 20 extra combs in the spring, I used them in two hives for extracting, got from the two hives, 727 lbs.; no increase from the two. My bees are about half blacks and half Italians, can we expect better results from shallow hives?

LEWIS KELLEY, Smyrna, Ionia Co., Mich.

I had 58 swarms in the spring. Increased to 92, got 2000 lbs. extracted and 1600 lbs. box honey. Put the bees in the bee house Nov. 11th, with 2825 lbs. of honey to winter on. This was a poor season for box honey. Clover yielded nothing; Basswood yielded eight or nine days. B. STONE.

Bond Head, Can. Dec. 10th, '74.

Bees out like spring, 70° in the shade to-day, but they are not carrying any pollen—tried flour—a few carry off small lumps. Tried baked sweet potato, they suck the juices, but saw none take any of it off.

M. PARSE, Pine Bluff, Ark. Dec. 27th, 1874.

We think it will be an advantage to feed flour whenever the weather will allow them to work on it.

How does Adam Grimm winter his bees? In cellar, in clamps, or on summer stands; out-doors, or in a warm bee house? Does he winter in single or double hives? As he lives in a cold climate, it may be an advantage to us here. I am wintering one swarm out doors on summer stand with straw lined hive, straw packed in 3 inches thick for trial. What kind of hive does he use? V. McBRIDE, Chardon, O.

In cellars we believe, and he uses a narrow single story Langstroth hive containing only eight frames. Every little while there is an attempt made to revive the idea of using very thick or double walled hives, yet we think no large apiarist has ever continued to use such for any considerable length of time. Mr. Quinby's recent hive is peculiarly adapted for this, yet we believe he and his neighbors now consider moving the colonies, into warm cellars etc., less trouble and more efficient. Mrs. Tupper has recently advised putting a large box over the hive, packing between them, etc., but the fact that this same plan has been discarded so many times in years past would deter us from advising it at present. Again: None but those who have tried the plan on a considerable number of hives, can form any idea of the trouble and *expense* it is, compared with simply moving the hive into a good cellar.

Have got a barrel candied honey, nearly white as lard. It don't melt fast by the fire, I guess I will have to unhead, and take it out with a butcher knife. Don't know the quality—Fall flowers. My bees extract the juice of the sweet potato and store it in cells, it soon granulates, but retains the potato flavor unchanged, so far as I can tell. The scraps of potato are all carried from the hive by the bees. Spring honey is too thick to extract easy, I only got 175 lbs. in a day and quit. I extracted on the 7th, 8th and 9th of Oct., to give the bees winter room, took 50 lbs. per colony of clear honey and left much winter stores.

W. F. STANDEFER, Dry Grove, Miss.

In that case you certainly have not given your bees room at proper time, have you friend S.?

Is it necessary to give bees water when wintered on honey in a warm and dry room?

E. FRANKS, Inland, O.

Although Langstroth teaches that it sometimes is, we believe it has generally been conceded of late that water is *not* necessary in wintering. We may throw some light on the subject. The watering arrangement described on page 74, Vol. 2, was put in our forcing house at the start, and the bees soon learned to visit it regularly when the room became very warm. Later, when the room had been enlarged, so that the temperature did not get above 70 or 80°, they paid so little attention to the water that the jar was allowed to become empty. We began our experiments with the lamp nursery and after heating it up to over 100°, we noticed the bees flying about as if in quest of something, this we soon found to be water, and after filling the jar they flew back and forth

with loads of water almost constantly while this high temperature was maintained, but stopped at once as soon as the lamp was turned down. While making this experiment a colony adjoining that were rearing brood quite briskly, paid no attention to the water at all; not a single bee carried water except those belonging to the lamp nursery. Are we not right in inferring that bees seldom need more water than their honey furnishes, unless their hives are too warm? and is it not also an additional proof that they need shading during the hottest weather?

I send you to-day a little package of smoke wood. I have looked around a little, and decided that I can afford such a package as I send you for 10 cts., and pay postage—thank you for the idea. If you think that enough will sell to pay for getting a supply, you may give notice in Feb. No. GLEANINGS. Except when the smoker is used for smoke on cotton, or lint, the wire cloth, to prevent sparks may be removed from the tapering piece, and it will work much better. It will save brushing off the soot every little while.

M. QUINBY, St. Johnsville, N. Y. Jan. 5th, '75.

What size Basswood trees would it be best to set out? How long does it take for them to come to maturity or blossoming? How long would it take for a tree two feet long to blossom? For one six or ten feet? What other kind of native trees would you advise setting out for the benefit of an apiary? Do you think it would pay to sow catnip seed on a rented lot, that we may not have more than one year.

ELLENA M. MUCKLER, Manchester, Iowa.

Probably small trees will blossom as soon as the larger ones, and we can only say that perhaps they will blossom in ten years, probably not to yield much honey before 15 or 20. We dislike to recommend any one to undertake to raise artificial pasturage for bees unless it be buckwheat, while so little is known about it. Had we not better confine our labors to securing the honey that is now wasted yearly, and let the veterans experiment with catnip fields etc. Sow the catnip and plant the trees for fun, if you like, but do not calculate on it being a paying business.

I suggest that you build the house with the flat roof, that you have benches the same as in a greenhouse with a flue under the bench, that in these benches you put about 10 or 12 inches of rich loam and about the 1st of Feb. the benches be planted with cucumbers. These you know furnish a great deal of pollen and the great difficulty in raising them in houses is that they blight or drop off as soon as the blossom drops which is caused by their not being fertilized. Even in hot-beds before the bees begin to fly, I have lost nearly all the first formed cucumbers, but as soon as the bees came there was no more trouble. In this way you can make the cucumbers nearly or quite pay for fuel, and the temperature should be about 70 or 75° by day and 50 or 52° by night, which as I judge is about what is necessary for the bees to be active. Or should you prefer you can raise strawberries which also blossom extensively, but I don't think furnish quite as much pollen as the former and when they are through blossoming begin to form fruit while cucumbers blossom continually. If you are not "fixed" for the flue arrangement or benches, try a box or two with good drainage in the bottom and water every day with water made quite warm, almost hot, and train them up on stakes or a frame. I don't see why a house managed in this way can't be made to pay a handsome profit on the cucumbers; I know they are in the East, and certainly could any where.

W. T. ALAN, Granville, Pa. Jan. 7th, 1875.

If friend A. is right it seems to us that *fruit growers* and market gardeners had better keep a few bees. That bees get dusted with the pollen from cucumbers we are well aware, but we have been of the impression that none of it was used in the hive, it being only accidental that they got so dusted, while in pursuit of the honey. We will test the matter further.

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and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. III

March, 1875.

No. 3

In the Preparation of this Journal the following are the Principal Periodicals Consulted :

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Southern Farmer,

Scientific American.

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SUNDRY MATTERS.

In making Bee veils use Tarleton in place of Crown Lining as advised on page 2, Vol. 1.

MRS. Axtell writes us that we made a mistake on page 10, Jan. No., when we give her credit of extracting 3000 lbs.; that it was only about one-half that amount.

We have just received an extra nice lot of Alsike Clover seed, new crop, raised in our own vicinity, so that we know it is pure and safe. Single pound by mail in cloth bag 45c.; by express 35c., if over 10 lbs. 30c. only.

WE learn from J. D. Kruschke, Berlin, Wis., that there is a good market for the oil from Rape, and that in fact we at present import it to supply the demand. We refer all interested in Rape culture to the little book to be had by enclosing 5c. to the above address.

Magazine reached us on the 15th, with its appearance much improved. On further consideration we have decided to keep the clubbing price with it and GLEANINGS at \$1.75, and \$5.00 for all the Bee Journals. If our readers will now excuse so many changes we will try to change no more.

MR. Doolittle, of Borodino, and L. C. Root, of Mohawk, N. Y., have each sent us a club of 20 subscribers, Prof. Cook, and several others, nearly as many. A few more such friends and we might afford to give you a larger Journal and larger type, without any change in price.

OUR thanks are due J. C. Colborne, of Chicago, for a description of the hive and frame used by Mr. Harbison. It is not a suspended frame, nor is it like Quinby's. We should prefer getting something more definite, and from Harbison himself, if possible, before giving it to our readers. Dimensions of frame about 12x15.

OUR mailing type goes by machinery that won't work unless 75c. be remitted once a year. Therefore look to the labels on your papers and see when your time will be out. If the paper stops coming blame the "machine" and not us; also, if the labels do not always present your account to you monthly, as it should be, drop us a postal.

WE presume nearly every one of our readers, has already done something for the relief of the Kansas and Nebraska sufferers; to those who have not had the opportunity presented them, we would refer to Mr. James Vick's proposal in his Floral Guide. His arrangements enable him to give a receipt for all money, and to also show how and where it has all been judiciously expended.

NOTWITHSTANDING all that has been said about honey dealers, we have at least two men in whom we feel we can place implicit confidence; Lippincott of Pittsburg, and Muth, of Cincinnati. Mr. Muth has for many years been dealing in supplies, and we have yet to hear a single complaint of him in any shape or manner. His honey jars are very neat indeed, and what is more they will hold an honest pound, or 2 lbs., according to the stamp in the glass of each. As an instance of the magnitude of his business, we may say that he has given the manufacturers orders for 1000 gross for the coming season; customers may depend on getting goods as soon as ordered.

My bees, 50 stocks, on their summer stands, are not doing well; weather very cold, some days below zero all day. A good deal of ice in hives, with not sufficient warm weather to thaw it and dry them out. Have lost some already, and shall lose more if the weather does not change soon.

JOHN T. TEMPLE, Ridgeway, Mich. Feb. 5th, '75.

THE San Diego Mountain honey does not candy although exposed to a freezing temperature in an uncovered vessel. Mr. Tweed says such is their experience, and astonishing as it may seem, such proves the case with us, while all our other honey under the same conditions, is white and solid.

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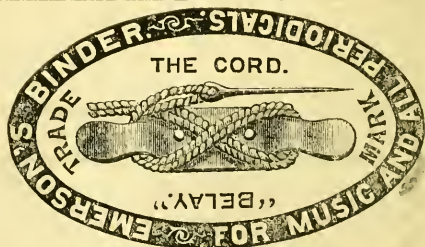
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GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

MARCH, 1, 1875.

No. III.

REMARKS ON IN-DOOR WINTERING.

BY JAMES BOLIN.

FRIEND NOVICE:—While I freely endorse the most that is contained in the article on, How to Conduct an Apiary, in the Dec. No. of GLEANINGS, I will have to dissent from a few of your conclusions, even at the risk of being accused of *heresy* again.

For instance; that the position that keeping bees warm etc., will save them, will have to be given up, and, since our wintering troubles, * * * nothing that has been done has amounted to a row of pins. [Beg pardon, we meant toward curing sick ones.—Ed.] except fine weather etc. Now the above may be true in the case of your bees, but I cannot think it will apply to many. I have pretty strong evidence that keeping my bees warm and quiet, *did* save them, as most of those in this neighborhood that were not wintered in warm depositories have perished with the bee disease, during the last two or three winters. Keeping mine warm has, in my opinion, amounted to a pretty long row of pins—a longer one in fact than any one would need, unless they wished to start a notion store, and even then they might be overstocked.

I do not think that I have ever claimed that cold was the *only* but merely the *main* cause of the losses that have occurred. The want of dryness and darkness in the winter depository has no doubt had considerable to do, in some instances, with the loss of bees that were housed, while disturbance, caused by taking a light in the room, looking at the bees, admitting strong currents of air, by opening the door at night, and introducing artificial heat has no doubt killed more bees than anything else, except cold. A prominent bee-keeper remarked last spring, that he regarded artificial heat as being indispensable in wintering bees; right in the face of the fact that he had lost about eight-ninths of his bees by its use, or at least, while using it. Rather a poor argument in its favor, I think. But I may be too practical in my views. Bees are very sensitive, and a slight jar, taking a light into the room etc., will often excite them to an injurious activity. I have frequently seen the advice given to open the door of the winter depository at night to cool and purify the air, but if the ventilators are arranged as they should be, I would much rather depend on them and keep the door shut.

You remark on page 139 of Dec. GLEANINGS, that opening the door and windows of your cellar only seemed to make the bees warmer. It no doubt had just that effect, as the bees were stirred up by feeling a current of air different from that in the room, [but what *should* we have done?—Ed.] and strong stocks, when disturbed, generate an immense amount of heat. I had a pretty fair sample of what they can do in that line two years ago when I put my bees in the house. We had a cold south-west wind at the time. The thermometer stood at about zero in the open air, and at 31° in the house when I began carrying the bees in. By having the door open it sunk to 20° in the house, by the time I had them in. I put in 88 swarms,—then shut the door for two hours,—when I went in again and they had run the thermometer up to 45°, being 11° higher than it was before the door was opened to put them in. It remained about the same all the time out of doors. By letting them alone, they soon became quiet and the temperature of the room fell to about 40°. Keeping bees *too warm* will excite them, and will have the same effect as keeping them too cold, cause them to fill themselves with honey, and if the excitement is kept up long, the result will be the same—they will be effected with the dysentery.

The thermometer in my bee house stands at 42° at this date, Dec. 14th, 1874, and a person on entering the

room would almost think there was not a live bee in it, they are so still.

That the Editor, and all his readers, may succeed in carrying all their bees safely through the present, and all subsequent winters, is the wish of JAMES BOLIN, West Lodi, Ohio.

OUR OWN APIARY.

WE mentioned last month that we gave the bees in the forcing house a brisk fly on the 17th, to accomplish this more effectually we removed the covers to all the hives, and this was one reason why only *four* bees remained on the sash. They saw their comrades just beneath them and of course "hopped down" among them. To avoid giving any erroneous impression we may remark that we spend the greater part of our Sundays with our books and papers in the forcing house, and on sunny days even the rest of the family find it an agreeable sitting room. Of course we do not mean to work with our bees on the Sabbath and should be very sorry to have any of our readers get such an opinion of us, yet it must be admitted that it so came about, that the bees instead of being allowed to rest on the Sabbath, rested *six* days, and on the seventh were expected to turn out and have a fly if nothing else. If they would not otherwise, we uncovered the hives etc., as above. Very likely friend Bolin will expect this treatment to kill them whether or no. Never mind; they would probably submit with resignation if they knew it was solely in the cause of science. On the 23rd, we warmed the house in the afternoon and made search in nearly all the hives for eggs, but none could be found. We were anxious to report brood in Jan., in our Feb. No., and so kept the room at a favorable temperature all day the 24th, and next day were delighted to find that the Queens had laid profusely, even to the lamp nursery which contained less than 100 bees with the Queen at this time. By the way we can see no difficulty in wintering any number of Queens with a tea-cupful of bees each, in this way. Our last form was to be printed on the 27th, and to get larvæ before this time required careful work, so we kept the room warm until the last item was set up, but "not a larvæ" could we see, and we dolefully sent you your papers with hardly a parting note in regard to our experiment. On the 28th we looked again and were cheered with the sight of whole patches of larvæ, so large it seemed we must have been hasty the day before. And now for pollen. Few of the colonies had any at all, some of them positively none, and the worst of it was the bees would take no notice of the spot where

they had worked so industriously on it in Dec. They seemed to take their flights close under the glass. On the 31st we were rejoiced to see the sun come out full and clear, and by 10 o'clock the room was abundantly warm without any aid from the stove, but not a bit would they notice the meal. We had read in the *Fruit Recorder* that plants, especially strawberries, must be placed *close up to the glass* to thrive. Was it not so with bees? In a twinkling the Simplicity hive cover containing the heap of meal was suspended from the sash within about a foot of the glass. Our better half here interposed that it was long past church time and we bent our steps churchward with about as much alacrity as did we when in the woods with the wild Touch-me-nots. We were late, and what is more were rebuked by having the minister pause in his discourse until we could get seated. Never mind we deserved it and will try and do better next time. May our path through life never lead, where the influence of such as he is unknown.

Do you wonder that we were in a mood to rejoice more fully, with the bees, when we found them happy as in June, dancing about our heap of meal, and now and then scampering into their hive as fast as their padded legs could carry them. Yet this was a cold wintry day outside, and the sun scarcely thawed the snow on the south roofs of the houses.

We should have said before, that our second sash were put in place about the middle of Jan. It has not yet been closed up warm and secure by any means, but it does excellent service in keeping the ice from the glass and preventing the attendant drip.

Feb. 1st—To-day we had sunshine again, and brood rearing is going on beautifully. The only drawback is the drunken bees that blunder about and finally fall on the floor; these we gather up in the evening and put in the lamp nursery where they revive and at least a part of them go through the same programme next day. Not all, however, for the lamp nursery is getting built up thereby. We forgot to mention that one colony was found Queenless; search showed her dead in bottom of hive. As she looked natural and perfect, and as the bees were healthy, we cannot think it any fault of our own that we now have 67 colonies instead of 68.

[The following is from A. I. Root personally.]

Feb. 8th—I hope and trust that I have many warm friends among our readers, many who have followed my efforts, in years past, and very likely who feel that they know my weak points almost as well as those who have held daily converse with me, face to face. If I have gained any hold upon you, and if you have any confidence in my truth and candor, please listen, and do not turn away, even if I talk a little to you on these pages, on something, that does not *directly* pertain to Bee Culture.

For a little time back a great light has been breaking above me. This light might have come sooner had it not been for several things which stood in its way; prominently among them, a vain pride and ambition in regard to this very GLEANINGS. I worshipped worldly things first, and my Maker, (when I worshipped Him at all) afterwards. In fact when this

great light commenced to reveal itself, I debated whether it was best to mention the matter at all, here; whether it would be—well, *profitable*. When these thoughts arose, the old darkness threatened to come back, until I could truly say, "I will do my Creator's work first *whatever* it may be, and bees and all else afterwards. Dear readers do you know that this is one of the first tasks shown to me, to use my influence whatever weight it may have, in all possible directions, to induce imperfect mankind to say with me *Thy will* our Heavenly Father, not ours be done.

Do you say you have no duties that you are aware of, left unperformed? Just as I did a very few days ago? Go read your Bible, read the commandments and see. When you have tried to live up to these, when you have tried to love your neighbor *as yourself*, and find you *cannot* do it alone, admit your helplessness and call on your Heavenly Father for aid, but first be sure you can freely give up all or *everything* in this world for His sake, and forgive all your fellow beings, as you hope to be forgiven. With a sincere prayer that God will enable these few words to reach you just as they were intended, I still remain *more than ever* your old friend A. I. Root.

Feb. 12th—Reports come in from all sides in regard to the extreme severity of the weather, and brood rearing in the forcing house is again suspended on account of the thick coat of ice that covers the sash and prevents even the noonday sun from penetrating and warming it up. Instead of feeling like being dissatisfied with such weather ought we not rather to take it as a lesson that our climate is uncertain, and that we should in building our wintering houses, cellars etc., make proper calculation for such extremes.

Feb. 15th—Still zero weather. The forcing house is so completely covered with ice that even the noonday sun scarcely has an effect on it. In Jan. *Am. Agriculturist*, Mr. Quinby describes the behavior of bees in cold weather, and also reiterates the statement made last season that the solid portion of the honey they eat during winter is evacuated in a dry state, and may be found on the bottom board of the hive, when the bees are in health. As soon as the paper was received we commenced some experiments to determine (as we supposed) the truth of the matter. We soon decided that Quinby was utterly wrong in both, and prepared to write a severe criticism. We are sincerely glad we did not for the spirit that was then prompting, was more a disposition to show that Mr. Q. was in error, than to get at the truth *wherever* it might lie. What we did was to raise a hive up from the bottom board, remove cover and quilt and subject them to severe cold weather. Although the colony (nucleus rather) contained not more than a quart of bees, they seemed to bear this without detriment. A sheet of white paper was placed under the cluster, and after a few hours the brown particles that had accumulated were examined. We thought then there was nothing there but bits of comb, propolis etc., but a more candid examination since has convinced us that, in some hives at least, the bees do void their excrement in a dry state, and perhaps they always do in perfect health. The second point was to see

how the bees behaved when it was cold; strange to tell they did not behave at all. They were simply, perfectly still, "dead as door nails," as Gallup used to say. We approached on tip-toe, and examined them by day light, and by lamp light, but it was all the same. We fixed our eye on a single bee, and watched it until our teeth chattered, but it seemed perfectly comfortable on the outside of the cluster. When the temperature became lower, quite a hum came apparently from the center of the cluster, but we could see no movement that should produce this; the bees that were visible, did not move their wings, and did not change places. Now then, when do these bees get food, and if they change about, why could we have not seen *just one* in the act of so doing? We confess we do not know, will some one else help? During the experiment once or twice, a bee would crawl out of the cluster and fly off in the cold and fall down and die. We then took a distant position, and saw the same phenomena, and from the number of bees found scattered about, we think it occurs about the same whether they be disturbed or not. A bee that is sick crawls out of the cluster, and out of the hive if he can, and dies. As they die thus, most in the forcing house, we may infer that brood rearing aggravates the trouble, or what is more probable to us is, that sudden and wide changes of temperature, such as we always have in the spring are severe on bees as well as on vegetation. The forcing house varies from 40 to 70°, now, almost daily. If this be true, our bees had better be kept in doors until April, or even later, if we can manage to do so; and those using the cold frames, should keep them covered and dark, except at intervals, until the days get pretty warm. All colonies have a pretty fair patch of brood, in the forcing house, it is true, but the old ones are dying off so fast, we fear we are gaining little.

Feb. 16th—Found Queen in lamp nursery dead on bottom. The bees looked bright and all right, and she looked natural, except that her body was somewhat distended. Our utter helplessness, in the matter is illustrated in the following:

During the last three winters, I have suffered heavy losses, and the matter has been a great puzzle to me. My reports of the last three seasons would have been much better, had my bees wintered well. I have for the last six winters kept my bees in an exceeding dry cellar, with an average temperature for the whole time of about 37°. For three winters they did well, then came disaster. To my mind, none of the causes and methods or theories advocated cover the whole ground or seem absolute remedies for this fatality in wintering. I firmly believe that it was an epidemic (or perhaps more properly an "epidemic") sent by Providence for purposes His own. The most curious part of my experience is, that stocks so nearly alike that I could detect no *slight* difference in quality, were affected so differently—one dying or becoming very weak while the other wintered in fine condition.

J. H. NELLIS, Canajoharie, N. Y. Feb. 10th, '75.

REPORT FROM L. C. ROOT.

EDITORS GLEANINGS:—You ask me to report results of the past season. I started last spring with 100 swarms, thinking this about the number one man should attend to, and considering it about as many as should be kept in one place, especially as there are over 150 swarms within one mile of us.

After placing bees on their summer stands which I did about the middle of April, my first business was to remove all combs except those occupied by the bees. Number of combs left in would vary from 3 to 7 giving space in hive to be kept warm according to quantity of bees. And here let me say that no one thing helped

me more towards success, than did the Quinby frame, by the use of which I could contract or enlarge space in brood chamber at pleasure.

The yield of honey from willow, apple, raspberry, and clover was light. My principal business up to the first of July was taking combs filled with brood from strongest swarms to help weak ones, and filling their place with empty combs. Basswood commenced blossoming about the 20th of July. Then came our flush. I increased my stock to 123 swarms.

Whole amount of box honey	-	-	-	3900 lb.
" " " extracted	-	-	-	7271 "

Total	10271 lb.
Have in winter quarters 121 swarms.	So far they seem to be in fine condition.
Mohawk, N. Y.	Feb. 1st, 1875.

QUINBY HIVE.

The following in regard to the Quinby hive is just at hand.

You say on page 15 that "in justice to ourselves we should smile to see the person who would dare undertake to find the Queen or extract the honey from a dozen Q. hives as quickly as we could from a like number of our suspended frame hives." I would smile to see yourself, or any one else undertake to do it one half as quickly as some half dozen I could name. Again, on same page, "where one has plenty of leisure Mr. Quinby's cheap hive has many advantages, and we may be mistaken about the time needed by an expert to open and close these hives." Now would it not be candid to say that Mr. Hetherington, Mr. Elwood, Mr. Van Deusen, and Mr. L. C. Root, have as much sense as common folks. Now what can be the object of using said hive, when hundreds have to be looked after if there was nothing to be gained from it. It is necessary for Mr. H. to work fast, if it is for any one. It is his business. He has used box, straw, and modification of Langstroth—has a thousand dollar's worth on hand, that he does not use, now. To suppose that he has thrown aside all this property without being quite sure he can work with greater facility with the hive he is using is paying his judgment a poor compliment.

M. QUINBY, St. Johnsville, N. Y.

It seems to us Mr. Q. writes a little unkindly, but perhaps we deserve it. In a matter of so much importance there should be no arguing, and no strife. Even should there be a test trial of the two hives, made by two experts, the result would be of little use to our rising bee-keepers. The question is, how will the people at large succeed best. At present we really know of no better way than for those who are undecided, to try one hive of each kind; what suits your neighbor exactly, may not suit you. Our having the Corners for sale, should make no difference in our opinion, and we try not to let it, but we cannot help wondering if Capt. Hetherington has ever tried a hive with these Corners.

In the *Am. Agriculturist* for Feb., the Quinby hive is described with illustrations. The frame differs a little from the one we described last month, in having the top bar also, dropped a little below the ends of the side pieces; also, the top and bottom bars are both alike and lighter. Dimensions there given are, uprights, 11x1½x1½. Top and bottom, 18½x3½, cut from inch boards. Ends are nailed firmly with finishing nails into top and bottom but projecting beyond them as has been mentioned, ¼ inch. The hoop iron hooks to hold the frames in an upright position, if they be used, can probably be bought cheaper of Mr. Q. than they can be made. The sides and top of the hive are made of ½ inch boards, planed smoothly, just the size of the frames, with cleats nailed on each end to prevent warping. The bottom board is 11x20x1, also cleated on under side to prevent warping. Mr. Q. says tie all together with a stout rubber cord, but it seems to us this cannot prove a very durable fastening.

SOME HOME MADE "NEW IDEAS," SPECIALLY ADAPTED TO NOVICES.

BY R. L. JOINER.

FRIEND NOVICE:—Enclosed find 75 cents for the next year's crop of "GLEANINGS." I have just sewed 1874 together and I would not take \$5.00 for it if I couldn't get another. My bees are sound asleep in their pit at present, and will remain there until about "St. Patrick's day in the mornin'." I took the precaution this fall of planking the top and sides of the pit, also of putting two doors in the front end, something as described in Dec. GLEANINGS. My observing neighbors tell me that I had better have let well enough alone, and buried them in the dirt as usual, but I thought a permanent place if as successful, would be better. If you remember, I used to have trouble about my bees swarming as soon as strong. Well as you told me, I found regular and thorough extracting a perfect remedy, but I soon had my hives jam full of brood. The two story plan was "no good," as my hives are practically three story ones now. I did not want to get new hives and I could see no way of building a story, like Pat's house "on behind." I solved the difficulty in this manner, I moved the hive half its width to the right or left and set another hive exactly like it, by its side, with the entrance the same way, and took half of the combs from the old stock and placed them in (without any care which hive had the Queen) and filled up each with empty combs, and run them through the height of the season in that manner, supplying the Queenless one with brood from the other as I extracted, and carefully destroying all Queen cells as I extracted each week. Of course I only practiced this with Queens that were very prolific and had their hives *bolting* over with bees, and united again as soon as honey failed and the brood was sufficiently contracted. I foresee and forehear all the objections that will be urged to this plan, and the main one will be, "Why didn't you let your Queenless hive hatch a Queen?" Well, I'll tell you. I wanted to see how much honey I could get from 25 stocks of bees even if some of the stocks did live in what we call out West a "double house." I don't pretend that it is any better than the "long idea" plan, except that when I wanted to contract my stock I had no "empty rooms" to carry into winter quarters. I am satisfied that the mammoth yields are from mammoth colonies. My yield is called enormous here but is small to what some report. I started with 17 colonies that had to be fed until June 15th. I increased by dividing, to 25 Queens, and gave 3 of them, double colonies as before described. I got 2150 lbs. of honey, 2000 lbs. of which was choice, and put 24 colonies into winter quarters well supplied with stores. I wasted the time of four of the best, for four weeks of the best part of the season trying to get some box honey. All I got for my trouble, was my pains, and the natural swarms, which I summarily returned, after throwing these honey boxes as far as I could send them, extracting every one of their *sealed combs* full of honey and destroying their queen cells. Let those who can, raise box honey, I had rather raise extracted for 4c per lb. than to wait all summer for box honey and then get none, for a dollar a pound. The boxes were put on "according to Hoyle," they had nice starters, they were tight, and all right every way only the bees would not move in. I am afraid they are the Novice breed and aren't in the box honey business. After I took off the boxes and took their honey, *didn't* they work though?

Well Novice, I've spun this yarn long enough now and am not half done, if you get tired reading why throw the whole away. If I ever come within fifty miles of Medina I am going to stop and see you and bore you worse than I do by letter. I'll tell you how I sold my honey.

Wyoming, Wis. Dec. 16th, 1874.

Don't go to the expense of coming here, friend J., it would hardly pay you we fear, but do keep on giving us just such sketches from your Apiary. We do believe you have hit on a plan that will prove many times quite practicable. For instance the Simplicity hive with, Langstroth frames, so long as one story will hold the bees, is to us the simplest, and easiest handled of any thing we have ever used in the shape of a bee hive, and we have studied long and earnestly in regard to some plan of uniting two of them side by side. All of these plans required too much tinkering. If we made holes for communication, through either hive, bottom

board, or cover, these holes would have to be plugged up at other times, and would look ungainly. Your plan of using them without other means of communication, than through the entrance, we confess is novel and so far as your experiment is concerned, seems quite practicable.

He who shows us how we can keep pace with modern improvements, and still keep the hives we have already in use, is truly a benefactor. To use the Simplicity hives thus, both entrances should be turned to the south, and the two hives placed close together. The covers in this case should be hinged to the front so as to turn up against the grape vine trellis, or hinges may be dispensed with entirely. In the height of the season, both hives can be pushed, well forward over the bottom boards, thus making the entrances the whole length. Should this prove "too much entrance," bank saw-dust up by the outside corners. In making so many new colonies last season, we governed the size of the entrances to exclude robbers, almost entirely with sawdust, and it answered the purpose more completely to our satisfaction, than any other plan we have ever used. Also, when the nights became cool, we banked sawdust clear around the hives, to close the cracks between the hive and bottom board. We are a great friend to sawdust; it keeps down the weeds, gives you a clean place to work, is clean and orderly for a small dooryard for the bees, and enables you to make just such an entrance as you desire. Beg pardon we forgot *sawdust* wasn't our topic.

Our Standard hive with its permanent bottom board without cracks, and its capacity for 18 or 20 combs without any fussing etc. etc., would perhaps be best, but then, "we haven't got 'em," as friend J. says, and just at present we rather prefer to use the hives we have already in use.

DIMENSIONS OF FRAMES ETC.

M. R. NOVICE & CO.:—Arn't we greenies glad that we settled down on our own Standard frame before you decreed something that one must print the dimensions with chalk over his work bench lest he forget it. We dislike the everlasting vulgar fractions and odd and even numbers about the size of frames. We adopted 12 inches inside of frame—144 square inches of emptiness—until filled with comb. Now any body can remember this size—and every one can build outside their frames just what kind of hive he pleases. It is just the nicest frame for taking in one hand, and for turning this way and that way for inspection and work, and also for leaving one hand to do something else, and we do find plenty for the free hand to do—all it can do sometimes. Then for shipping, why they are just the nicest and handiest frames ever made, and for housing too, hives of 10 frames pack away like brick in a wall. So you see we are not a bit sorry for ourselves—and we are so glad to have the ladies with us, we have Mrs. Tupper who is a representative character and carries the women with her in this matter. Of course we are sorry your wind-mill won't work for us in the wood work of our hives at the "Standard prices" but we can't be driven by wind into abandoning our 12x12—"On this firm rock etc." Why our hives are so jealous they won't let one frame of the Factory of the Wind, enter their yard now—we have no doubt that to set down one of your vulgar fraction and odd number frame hives would raise a mighty buzz and set all the 12 inches on a revolution against any such vulgar innovation. By the way we have got a hive "the likes on't you never did see." We took the Alley hive—paid the right to it too—and now we have some Alley, and some Quibby, and some of our own whims, and it is going to be just the nicest and handiest of a' the bee gums that can be found in Patentdom or out of it. May be we'll tell you what it is some day—if you want us to bother you.

He—that is we greenies—use the Isham honey box—the nicest, staunchest, and handiest honey box we ever saw. We know him he lives round here, he has a patent on his box—we saw his papers, all regular—he deserves them too—has lately sold three counties to an apiarian who has seen a good many such affairs, and sold for a handsome sum. If you saw it, you would want a State at least—the *work* would suit your taste.

Now to finish all this rigmarole and to convince you that we are your friend, tho' we expect you will blow us with a stiff breeze, we say—we frankly confess, that we have tried your tin corners for frames, after using wooden ones, and we don't want to see in our hives another frame that has not those same tin corners. And our green advice to all beginners is, don't make a single frame till you get these corners. We shall get rid of all our frames which have not these corners just as fast as we can. We have tried several hundred of them and now we send our orders for 6500 more *with the cash*, as evidence that we mean what we say.

2. EROAPIANS.

[We can give full address to any who may desire, but the writer at present prefers a nom de plume.—Ed.]

At the risk of having the above sound something like a puff for the corners, we have decided to give it a place, especially as some disparaging remarks that have been given might tend towards giving an impression that the corners hardly deserve. We will cheerfully give place to anything on the contrary side, coming from any Apiary where they have been considerably used.

Our friends are in error about Mrs. Tupper using a frame 12x12 *inside*. Variety of taste has dictated so many different thicknesses of the stuff composing the frames, that we cannot see how our friend gets rid of fractions by using *inside* dimensions as a standard. We have seen end bars in use *one inch* in thickness and top bars with a massive comb guide still thicker. Supposing we all should adopt a uniform size inside of frame, where would be the outside, and what would be dimensions of hive to suit? We can readily make metal cornered frames to agree in outside dimensions, with any frame in use, and this allows them to be worked in the same hive mixed up with the old ones, thus giving the owner a fair chance to contrast their lightness, ease in handling, and at the same time greater capacity for brood and honey, from the larger comb surface.

We certainly don't want any of your friend's "rights" but if you will send us a sample of his honey box, we will cheerfully help him sell it, if we think it meritorious. Let him manufacture and supply all demand, and let his patent papers protect him in so doing. Nice honey boxes should be made by machinery, and ordinary bee-keepers would prefer to buy rather than to make them.

A NOVEL IDEA IN WINTERING.

WITH SOME OTHER IMPORTANT FACTS.

I HAVE used several hives with an outside case filled in between with straw or leaves, for five or six years. Also hives with double boarded sides and ends with dead air space between the boards but I fail to see that they do any better than the single boards. Last winter a small colony in a hive of $\frac{1}{2}$ inch boards wintered well without any protection except the quilt covering on top, and the entrance closed with a piece of wool when the weather was freezing. I have two small colonies (made up in the fall of my nucleus hives) in the same hives, and they have stood thus far as well as others. The only difference that I see, is that they are more apt to fly out when the sun shines brightly, and need shading.

Another experiment.—I saw it stated that empty space beneath the bees was of great advantage. Last winter I removed all the frames from the lower story of a hive and left the colony to winter in the upper

story. They did well, but it was a very fine strong colony and proves nothing. This winter I have quite a weak colony wintering in the upper story and doing very well so far.

Third experiment.—Some years ago I was preparing my bees for winter by removing frames from upper story and putting on quilts. In one very strong colony the bees remained on top the frames in large numbers. I pulled off an old wool hat and placed over them and spread the quilt over that. I found the bees filled the hat and remained in it all winter. Since then I have used all the old hats I can find. I notice in some instances that half the bees of the colony are in the hat. When those in the hat get hungry, and those below get cold, how nice and easy it is for them to exchange places, much easier than to go from the outside of the cluster to the inside over or around the frames—that is, provided that is their way of doing—for instance, when one little fellow's feet get cold he goes inside to warm them, and another little fellow comes out to take his place. This I believe is the generally received theory. I noticed it so stated lately by one of our most distinguished bee masters, (M. Q. in *Am. Agriculturist*). As I never saw any such commotion among them as would necessarily be the consequence of all this changing in cold weather, you must excuse me for being somewhat skeptical about. Has anyone *actually observed* this continual changing places in cold weather? Akin to this is another statement we frequently see made—that the colder the weather the more the bees require to eat to keep up the animal heat. This is all very nice in theory, but so far as I have observed, the bees are very quiet and still in cold weather, and scarcely consume any honey at all. These may be subjects worthy of investigation. I don't propose to discuss them here.

I have experimented some with the Adair—Gallup long idea hive, or rather "New Idea" long hive. I used two hives three feet long, one with large frames 13 square—the other with my standard narrow frames. I gave them the strongest colonies I had, and I must confess that neither of them gave as much satisfaction as the plain two story hives. They may not have been long enough (?) they did not swarm and did not fill the few empty frames I gave them.

I am aware that these experiments do not conclusively establish any particular fact or theory in bee-keeping but they may throw a little light on some points, and I find them useful in my own practice.

THADDEUS SMITH, Point Pelee Island, Ont., Can.

Friend S. it seems, has the rare good sense to see that single experiments do not settle a matter by any means. We are quite taken up with the old hat idea. Get one just large enough to hold your colony, and keep plenty of sealed honey below them, and they will be in the *best possible* wintering trim, if we know aught of bees. We once wintered a colony without any honey board. We supposed they had been given the ordinary allowance with the rest but may have been mistaken. They were out of food before March, but they had commenced to rear brood briskly—rather in advance of the rest.

SECTION HONEY BOXES.

IT is at least too bothersome for me to make the Harbison frames, as per GLEANINGS; I have made some very nice frame boxes, top and end pieces all $1\frac{1}{2}$ inches wide, ends are 5 inches long and top and bottoms $6\frac{1}{4}$ inches long and nailed to end pieces, which are $\frac{1}{4}$ thick and top and bottom $\frac{1}{4}$ inch thick; outside sections are $1\frac{1}{4}$ wide with a groove to receive a glass 5x6. I place the pieces in a long bottomless box or frame, wedge them up together and nail them, and then fasten strips of stout paper across them. I forgot to say in the proper place, that for an entrance I cut a notch in each side of the bottom pieces $\frac{1}{4}$ x 2 inches. I leave the bottom pieces wide because it makes a better box and is more convenient, one box can be raised up and another placed under it without much danger of killing bees, use a wax guide in each frame.

R. S. BECKETT, New Buffalo, Mich.

[As it is a little inconvenient to cut the notches in the Harbison frame with our circular saws, we think they may be omitted and the stout paper used as above. In making these light frames, perhaps it would be well to fix on a size that would allow of putting 4 or 6 inside our large frames. Quinby advises this with his new hive, and illustrates it in *Am. Ag.* for Feb.—Ed.]

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, MAR. 1, 1875.

ALMIGHTY Father! We pray that thy blessing may accompany each separate number of our little Journal on its mission among the bee-keepers of our land. May each and every one of us bear our losses during the present and ensuing months, should such there be, with a proper spirit of resignation to events we cannot control. Give us also that cool, calm, and deliberate frame of mind, that best prepares us to look earnestly about, and see what means thou hast placed within our reach to avert a repetition of our past troubles during the spring months. Give us submission, without a spirit of idleness, and teach us to work while we pray. Enable your servant to deserve the great trust, that he has never until now felt has been accorded him. Give him that humility that will enable him to forget self and labor honestly for the benefit of his brother bee-keepers, and to deserve the confidence they repose in him.

A. B. J. Magazine, and World, for Feb. were all on hand in fair time, and are all good.

KRUSCHKE Bros. are now supplied with Rapp and Esparect seeds just imported; see advertisement.

WITH pleasure we refer our friends wanting Queens or full colonies, to the advertiser of J. Oatman & Co.

CHINESE Mustard seed seems difficult to find, but we shall have some in due time we think, even if it has to be imported.

WE shall have to refer all those inquiring for bees to our advertising columns. Everything we have for sale is in our price list.

SUMMER Rape seed, American grown, by mail in cloth bags, per lb., 25c.; per express 15c. These will be our rates for the season.

PHOTO's for the Medley are still coming in, and as we wish to include all that will send them, we shall delay it perhaps a week after this number reaches you. Remember this is the last call, and that we wish to include every bee-keeper whose eye meets these pages.

ON page 104 of Vol. 2, Mr. Quinby says the Queen of Mr. Elwood's colony that produced the great yield, came from us; yet in Mr. Elwood's report page 19, current Vol., it does not so appear. Who is in error? We certainly wish no credit given the dollar Queens which they have not earned.

WE are happy to say Miss A. (P. G.) has recovered from the fever and is again at her accustomed post. We trust our friends will now have less cause to complain of the types and other small items, that have of late too often prevented things going with the promptness and accuracy that makes business a pleasure.

IT seems some of the other sex are determined to have the "last word" in regard to bee stings; a privilege we accord them with all the good will imaginable, after we have mentioned for the benefit of beginners, that no matter how distressing are the symptoms at first, they will very soon get injured to the poison, and finally, no swelling will ensue at all.

THIS is the month for feeding the rye and oat meal, with most of our readers. Put in shallow boxes out

of the wind, but in the sun as much as possible. Here is a chance for you to exercise your ingenuity in so arranging a glass sash, as to secure these conditions, and yet not trouble the bees by having them bump against the glass by mistake. If they don't notice the meal, as some complain they will not, start them by giving a piece of comb honey laid in the midst of the meal; get a few bees on the comb from several hives until they have got a taste, if you cannot start them otherwise. When they begin on natural pollen they will take little notice of the meal. Equal parts of oats and rye ground fine seems to please our bees best.

WE are very sorry indeed to be obliged to say that we think "Money in the Aplary" by H. A. Burch, by no means worth the price (25c.) asked for it. The more so as our relations with Mr. B. of late have been of the most friendly nature, and he has uniformly spoken well of GLEANINGS. The book is entirely too small, containing only about one-fourth the matter of a single number of any one of our Bee Journals. King's Bee-keeper's Text book, only costs 15c. more, and yet it is a work of 140 pages, condensed, and to the point, alphabetically indexed, etc. etc. Money in the Aplary contains less than 20 pages, less in size, and some of it unimportant matter at that. We advertised the work without seeing it which we regret, but it would be unkind, and do no good now to find fault with what is past; shall we not rather consider a remedy that will do justice all around? Our advice, would be that Mr. Burch give his patrons four just such pamphlets, for the 25c. he has received, and make it a quarterly. If he will do this, we will give him a standing advertisement gratis.

Feb. 24th—All three of the hives, that we are wintering out-doors, have come through so far in good condition so far as bees are concerned, although they spot their hives and the ground badly. The hive bro't from a distance worst of all; the one prepared with woolen by Miss A., next, and the Standard hive best of all. The latter stands just where, and just as it did when we left off extracting, has had no preparation nor tinkering, and is all in complete trim to extract again, so soon as its 20 combs are filled. Could we be sure of making a whole Aplary winter like this one, we should feel quite relieved, even if we were obliged to put two fair colonies into every hive to do it. The Queen has just commenced laying. We were agreeably surprised to find that almost every bee from these three safely regained their hives, while those in the forcing house, collect in masses on the glass, get nearly all of them into one hive, and seem in a fair way at present to become utterly demoralized, although they have reared quite a patch of brood during this month in some of the hives. Will others using the cold frames, please send us minute reports? Even though our own now looks discouraging, we are going to give it a careful test to the best of our ability, clear through.

DOUBLE WALL HIVES FOR WINTERING AND THE FINN BEE HIVE.

IT will be observed that we have among our advertisements, one of the Finn Bee Hive. In receiving this, we feel it a duty to state, frankly our opinion of the matter, and then if the parties think we should, we will cheerfully return the \$1.00 they have paid us for this one insertion. Of course what we say here must only be taken for our own opinion, and in the matter of selling rights we may have been unduly severe. In matters of this kind it is a very safe rule to ask ourselves if we are honestly doing as we would be done by.

If Messrs Keyes & Finn made hives for sale such as they advise and sold them for a fair price, there could certainly be no wrong, for very many bee keepers of late stoutly affirm that bees do winter safely in hives well protected, on their summer stands, while those side by side, not so protected, perish. In order to show both sides of the question, we give the following:

They are stowed away in boxes packed with straw. Kept good in that way winter of '72 and '73, all that were packed early. Those that were packed in Jan.

of same winter died, though stronger in bees and honey. W. S. LINT, Postoria, O. Jan. 5th, 1875.

At present, Feb. 10th, 38° below zero. I put 28 hives in the cellar and have lost one. They are too cold, temperature varies from 29 to 34°. I would prefer 42° as nearly as possible to keep them. I put up 20 in rough boxes on summer stands, boxes six inches larger than hives, filled in with shavings. I have wintered so two years and never lost any. They seem in fine condition but it is quite expensive—cost me \$15.00 to put up the twenty hives but think it pays well. Would like to have them all put up in the same way. One of my neighbors had three stocks in box hives and has lost them all, think the loss will be quite severe in this vicinity.

LEWIS KELLY, Smyrna, Ionia Co., Mich.

Having had the pleasure of a visit to the Apiary of J. S. Hill & Sons, near Mt. Pleasant, I will, with your permission, Mr. Editor, say a few words in regard to it. Any one entering their bee yard can see at first glance that there is the best of order, system and management. It contains 85 large Langstroth hives completely storm and weather proof, adapted alike to the storms and zero cold of winter, and the broiling sun of July and August. Perfect ventilation with no possible chance of a draft of cold air on the bees, and no danger of moisture or frost in the hive to give the bees the dysentery.

Mr. Hill having years ago been convinced that cellar wintering would not do in our changeable climate, has given a great deal of thought, time and attention to the business of out door wintering; that he has made it a success, is proven by the fact that his loss in the past four or five years, has been very light, in fact scarcely any loss at all; while others all around him lost heavily. He manages to get them through winter, strong in numbers and is not troubled with colonies dwindling down in spring and deserting their hives, as did so many the past two years where they had been wintered in cellars and other repositories. Mr. Hill is a firm believer in strong stocks—in keeping them strong the year round—takes the position that the only sure way to have strong colonies in early spring, is to see to it that they are strong in the fall. His location is not nearly as good for honey as many others, yet the amount he takes yearly would satisfy many of us who are in more favored localities; his only dependence for surplus, is white clover, having no poplar, Linden, or buckwheat, consequently the honey season is rather short, ending by July 1st. The hive used by Mr. Hill is, of course, not a dollar hive, and would perhaps be thought, by some bee-keepers, to be entirely too expensive, but all things considered I believe it to be the cheapest for out-door wintering.

JONAS SCHOLL.

Lyons Station, Ind. Jan. 6th, 1875.

Were we to stop here, we might think the matter settled, but why does Quinby now advise a hive with only *half inch boards* as a protection. His large hive was most perfectly adapted for packing material on all sides of the bees, even to a thickness of 8 or 10 inches. In the large Apiaries about him would it be fair to suppose they had abandoned this plan before giving it a fair trial? We should much like to hear from Hetherington, Elwood, and others in this matter. See letter on page 29. The testimonials in regard to the Finn hive are none of them from practical bee-keepers such as are known through the Journals, and none of them owners of large Apiaries. If we wanted to make a hive such as they describe in their circular we assuredly should not think of buying a right for the privilege, but if they would make us a hive at a reasonable price suitable for receiving our frames, so that we could easily set a colony into one, we would prefer to buy of them rather than make one.

If Adam Grimm, and Capt. Hetherington will give their opinion in regard to double wall hives compared with single ones for out-door wintering, we will cheerfully pay any reasonable sum for service. During our protracted cold weather, many complaints have come in, in regard to ice forming in hives left out-doors,

and many losses are reported already. In cases like these, we do think the straw mats a great advantage, and is it not possible that they are as efficient as the expensive double walls?

HONEY COLUMN.

FRIEND ROOT:—Please name a few parties of whom I can buy Basswood honey and oblige. CHAS. F. MUTH, Cincinnati, O. Feb. 3rd, 1875.

I have now on hand about 60 gallons of that choice thick Clover honey, same as you bought of me, there is very little sale for it here. Price 18c., delivered here. Wm. PAYNE, Spencer, Medina Co., O. Feb. 1.

Have sold our Catnip honey to W. G. Smith, St. Louis, 15 cts. delivered, he paid promptly. The barrel came to \$64.55 net; that isn't bad is it? Shall set out half an acre of plants next spring, and sow some seed too. J. L. WOLFENDEN, Adams, Wis.

I sent my honey to Barber & Stout, Cincinnati, O., got 15 cts. cash on delivery and was paid to a cent. I also sent J. Lippincott, of Pittsburg, Pa., one barrel. Now Novice, please accept my most profound thanks for your assistance in disposing of my honey, by your recommendations to the two above named honey men. There is nothing like keeping bees to restore a burned farm, and dollars are by far the best chromos.

J. DUFFELER, Wequiock, Wis. Dec. 16th, '74.

Humbugs and Swindles Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

WE cut the following from E. C. Hazard & Co's circular, 192 Chambers St., N. Y. HONEY.

These packages are made of flint glass, tight, very attractive, convenient size, and salable, possessing a marked advantage over all other Honey in the market, because of its non-congealing tendencies. The Extracted Honey in bottles and tin, culled from Alsike Clover, and Orange blossoms and thrown from the comb by centrifugal force, is entirely free from all foreign substances and will be found to possess the delicate BOUQUET and medicinal qualities so seldom found in the ordinary commercial article.

E. C. H. & CO'S PURE EXTRACTED HONEY:

In Quarts, Fancy Decanters, per doz. \$1.50

We might think this a mistake but the *Grocery and Provision Review* of Jan. 18th, quotes precisely same prices. As a quart of good honey weighs 3 lbs., these good people are selling it at 12½c. per lb. and charging nothing for those *Fancy Decanters*, packages, cost of putting up etc., etc., and yet producers get from 15 to 16.

Reports Encouraging.

I CAN can report 850 lbs. comb and 150 lbs. extracted honey from six swarms with Quinby hive. O. J. HETHERINGTON, East Saginaw, Mich. Nov. 25th, 1874.

From 34 hives we took 3000 lbs., 600 lbs. box and balance extracted. T. E. HAWKINS & BRO, New Frankfurt, Mo. Dec. 18th, 1874.

Twenty-three colonies of Italian bees made 160 lbs. of extracted honey to the colony last year up to July 15th. JOHN SCHERER, Ridgely, Mo.

I commenced last spring with one swarm on three combs, and they were not crowded at that. I extracted 25 lbs. honey, increased to four that have 22 lbs. average of their own stores. O. W. PARKER, New London, Minn. Dec. 25th. 1874.

Twenty-two stocks in spring—taken 1120½ lbs. extracted honey, 288½ lbs. box honey, have now 46 strong stocks and 14 Queen rearing nuclei and weak stocks. Increased by artificial and natural swarming and lost several natural swarms. M. PARSE.

Pine Bluff, Ark. Nov. 22nd, 1874.

I had 26 stocks of bees last spring in Langstroth hives, one-half of them were very weak. I got 1100 lbs. of box honey from 20 stocks, it was sold for from 20½ to 23½ cts. per lb. I have increased my bees this year to 45 stocks which I have put into winter quarters with from 30 to 35 lbs. each.

Wm. J. DEDRICK, Borodino, N. Y. Dec. 14th, '74.

I had 60 swarms in the spring, some of them very light in bees. I increased to 100, from natural swarming, and they made a little over 5000 lbs. of box honey, including that not copped. I hived no second swarms. I used virgin Queens mostly, and cells. Often some would be about hatching; I would then put them in after a swarm issued. Bees seem to be wintering well.

D. C. McCAHOUN, Hornellsville, N. Y. Feb. 1st, '75.

32 swarms in spring, made 3000 lbs. surplus, increased to 50, (of course it was all extracted) and have sold it all for 15 cts. per lb. delivered on track. The honey was nearly all from basswood, clover did not do much. The fall was very dry and the bees got very little after basswood failed. Don't know how they will winter, but they are all right yet.

JAMES SCOTT, Epworth, Dubuque Co., Iowa.

Last winter I put up 68 swarms, all came through alive but lost 4 which were Queenless; sold two more which left me 62. Increased them the past season to 99 swarms and got 2600 lbs. box honey and 600 lbs. extracted, for which I realized about \$600.00. I sold 31 swarms for \$7.50 each, so it leaves me with 68 swarms again this winter, all of which seem to be wintering well.

W. H. TENANT, Eureka, Wis. Jan. 18th, '75.

Began the season with about 20 stocks in poor condition. Five stocks Queenless in spring. Increased them to 37 in fall, in apparent good condition to winter. From 6 stocks in non-swarmers, took 560 lbs. box honey; from the best, 110 lbs., from the poorest, 65 lbs. Built up and increased the remaining stocks, and took 760 lbs. liquid white honey from them. Fed in the fall, 15 lbs. "A" sugar. Reared during the summer, 36 surplus Italian Queens.

J. H. NELLIS, Canajoharie, N. Y.

We have only extracted from 5 stocks this summer as we thought best to "go slow and sure." Well, we took from those 5 stocks over 300 lbs. of honey, and increased them to 13 good stocks with plenty of honey for winter supplies, while our other 4 left for box honey and natural swarms, have swarmed altogether too much, and gave very little surplus. And worst of all, some of the young swarms went to the woods, in spite of all our endeavors to prevent them.

ILA MCHESLER, Low Banks, Ont., Can. Oct. 19, '74.

The summer was very dry, so there was very little honey stored. But the fall was unusually fine. Four stocks devoted to box honey, gave 128 lbs., an average of 32 lbs. per stock. Nine stocks yielded to the extractor 744 lbs., an average of 82½ lbs. per stock. The largest yield from any one stock was 153 lbs. I increased my 13 to 23 and they go into winter quarters in good condition with 50 lbs. of stores per hive. I should have extracted a little closer, but was away from home at the time it should have been done.

Dr. W. H. P. JONES, Nashville, Tenn.

Last year I tried small frames something like Harrison's, only I had them so that the bees could work all ways through them—could tier them up etc. It was on a Quinby hive or rather frame, put small frames on sides and top, got between 90 and 100 lbs. of comb honey and one swarm of bees besides. I shall try them several ways the coming season. The best I have done with boxes is about the same as above. My frame is 14x10 inches, inside measure—have three New Idea hives—bees swarmed out of them while I was extracting in spite of all I could do. How's that?—never saw such a season for swarming returned most of mine. I have only 26 swarms and do not want to increase if I can help it for I cannot attend to them. I winter in a large cellar and lose no bees. Keep up my experiments winter as well as summer. That's half the fun. Most of my frames are so placed that the boxes come up plump against the ends of frames and are just as close to the brood as those on top and in fact the guide comb is a good deal nearer, and no bee can

stick his head out at the ends, unless he sticks it in the boxes; but I forget you are no box man!

R. H. MELLE, Amboy, Lee Co., Ills.

HOW TO FLY BEES IN A ROOM.

In the spring of '73 bought two colonies of bees, having poor health thought the attention to them in the open air would be beneficial; finding the business so pleasant and profitable concluded to make it a permanent business, and have given my whole attention to it. Increased my two colonies to ten, bought 12 more, making in all 22. All came out good in the spring of '74, and I got 2100 lbs. box honey and 400 lbs. extracted, and increased to 47. I have now 65 colonies in my cellar all in good condition except one, which showed signs of dysentery. I gave them a fly, and this is how I did it. Took pine strips one inch square, made a frame 4 feet square and 2½ deep; covered sides with news-papers tacked on, spread papers on the carpet of sitting room near south window. Set my frame on it covering the top with mosquito bar, set hive outside with entrance opening into it through a hole cut in paper. Waited until bees were all quiet then warmed up room to 65°, standing thermometer against hive; all flew well for five hours, cleaned out their hive, and as darkness came on, all returned to hive again, making it a perfect success. The papers were badly soiled. Shall serve the rest the same if necessary. By flying them this way with but a trifling expense you need not lose a bee. Winter my bees in cellar with dirt walls, temperature 40 to 45°, cellar very dry. I use Langstroth hive, got most of my honey in 20 lb. boxes, two boxes cover a hive—not quite as salable but I get good deal more honey in large boxes. Box honey averaged me 24c. per lb., extracted 20c. per lb. Extracted only to give room for the Queens to lay.

D. BASSFORD, Watertown, Wis. Jan. 25th, 1875.

P. S.—Would not advise any man to fly bees in the sitting room without the full consent of his better half.

BASSWOOD OR LINDEN; STARTING A PLANTATION.

I HAVE no Linden seed on hand at present. The seed should be planted in the fall or kept in damp sand and planted early in spring. As a general thing the seeds are about two-thirds bad. I think cuttings are best to raise plants from. They nearly all grow, if rightly handled. I sell the cuttings in spring at 30 cts. per 100, free by mail.

THOMAS J. WARD, St. Mary's, Vigo Co., Ind.

The above answers many inquiries. In the fall of 1871 we gathered and planted about a half peck of basswood seed, according to the directions given in Fuller's Forest Tree Culturist. So few of these came up that we never used them at all, preferring to get our 4000 for the 10½ acres from the forests. We have reason to think that basswoods grow better when partially shaded, than in the open ground. On a part of our lot, there are about 50 large white oaks; we at first hesitated about planting the young trees among these, but now find those among them, have made the best growth of all. Perhaps many of our readers have noticed the rank vigorous growth that these trees often make when young, where they stand in a thicket of bushes and briars sometimes in fence corners. Shading the ground around the roots, from the hot sun, when young, we think perhaps an important item. Although we have never tried cuttings, we think it probable they would answer excellently. A tree on one of our streets that was planted out with some maples about seven years ago, blossomed last year for the first time, but it was taken up when so large that it did not begin to grow, until about three years after transplanting. For reasons mentioned, we should advise close planting at first, say 10 or 12 feet apart, on a plan similar to the one given in Vol. 1, pages 2 and 25, for locating hives in the Apiary. When the trees get crowded, thin out. The timber will soon pay all expenses.

Heads of Grain, FROM DIFFERENT FIELDS.

LISTEN to the patent right vender and do nothing but shake your head, says the *Rural New Yorker*, but I don't approve of that way. My Mother often told me when I was little that I would learn to *but* if I shook my head so much. I will tell you how I served an "Agent," of some kind. I was in my Apiary working with my bees, and he laid his satchel on a hive that was near, and while he bothered me, he still kept knocking the hive with his satchel. The bees began to get cross, but he didn't think you know. Pretty soon the bees came out and "went for him" lively, he began to dodge and slap, but he soon grabbed his satchel and began to "beat a retreat," slapping and cracking his head with the satchel and spoiling his fine hat all to pieces, he "hollered" back he had enough of the bee business and left. It was laughable to see him "light out."

V. McBride, [page 11, Jan. No.] says that during the winter of the malady, all the bees in Langstroth hives died, and two-thirds in others etc. I saw bees in all kinds of hives that died, some in box hives from one foot to five feet high and some in some old washing machines turned up side down, others in the gable end of a house, some in the old straw hives and all kinds of patent hives, and by the way they died in all kinds, about the same. Some had the patent hives and lost their bees and then blamed the patent hive, but I found it was their fault oftentimes, as it makes it a little handier for them to divide their bees and to take their honey. They think the patent hive ought to make honey without bees almost. I guess the "king" don't manage right some how as some of those old farmers call them; don't you think Mr. Root, that it is the King's fault that the bees die?

D. H. OGDEN, Wooster, O.
We guess it must be the *King* friend O., for we feel sure the *Queen* is not to blame. Our very best colony in 1873, dwindled down to the weakest in the spring of '74. They went down to a mere handful, swarmed out twice, and it was only by giving them hatching brood several times that we could barely get the *Queen* through until July, and then she proved herself fully equal to what she had been the season before; in fact she kept putting two or more eggs in a cell all through the spring months. It is only the *workers* that die off as soon as brood rearing commences. The very same process is now going on in our forcing house (Feb. 5th.) yet the brood will get ahead we think. Keeping the sick bees warm in the lamp nursery revives them some but they soon die nevertheless. The idea advanced that it is a kind of *fly* that kills the bees, can certainly have nothing to do with our losses.

NOW FOR THE HOT BED.

Jan. 22nd, we let the sun in to the pit and at 2 P. M. there was a perfect jollification, just like a lot of young bees playing in summer. And they did "spot" things inside the pit at a great rate, showing they needed a fly. As soon as it began to cool down they all went in to the hives except some dead ones on the straw, no more than would have been found if they had flown the natural way, and about two-thirds of a tea-cupful which were stuck on the sash in groups from one to a dozen. These latter we brushed out on a dust pan and put in top of one of the hives, as they were still alive, and said hive was mighty "sassy" too; seemed strong in bees, plenty of honey, and combs dry. The pit was not dug till after the ground was frozen 8 inches deep, consequently there was considerable frost on the glass which we swept off as soon as the sun loosened it a little. The dampness inside the pit was soon dried and everything went lively.

We were going to hoist our hat for the hot-bed, but guess we'll wait till spring before we shout too loud.

Don't forget the "Medley" for we want to see Katie Grimm, Mr. Grimm, and all the rest.

W. M. KELLOGG, Onelda, Knox Co., Ills.

A Mr. Abbot, of Wakeman, O., uses leather instead of quilts. He says the leather is cheaper and does not rattle or stick. He fits them tight on the top of frames and they did not mould last winter and the bees wintered better than under quilts or tight frames. My

bees in my hot-house when it has been warm enough for them to fly (no fire as yet) readily find their way back to their own hives, while those on their summer stands (though protected on the top and north sides) died by hundreds if not thousands on the snow as they lit and fell on it last week.

T. L. WAITE, Berea, O. Feb. 4th, '75.

We had an intimation some time ago that Mr. Abbot had a remedy for propolis, above the frames. Leather being porous, might do very well, but will it not kill bees when pressed down on them? Again, can we get a piece that will cover a hive for the price of a quilt, and what kind of leather is best? Mr. Abbot claimed that he had some valuable information to sell, on the subject. We presume most of you have discovered that those who claim to be possessed of valuable information, *not to be found in books*, are generally somewhat of a fraud; never mind friend Abbot, if you have by experimenting got hold of something valuable, bring it along. We will pay you for your time and trouble.

I had to-day to open the entrance full size to almost all hives. Bees keep up a lively hum and are carrying in loads of pollen equal to spring work. Considering your mortality from disease and cold in the North and your continual trouble and anxiety, I think we have far the advantage of you.

I lost one very weak swarm this winter by robbers. This is by far the worst enemy I have to contend with.

J. B. RAMSEY, Abbeville, La. Jan. 21st, '75.
And with your advantages, friend R., why do you not build up larger Apiaries, and raise honey by the car load as do our friends in California? We can imagine the smile of relief that would spread over the faces of some of our readers, had they no worse trouble than robbers to contend with.

When I ordered the two first volumes I thought I could do without GLEANINGS 3rd Vol.—But it won't do. Don't forget the Jan. number. "TWONT DO! No, if "blue eyes" falls down over the boards you must stop and help her up. In our haste, don't let us make a God of our Bees.

Have 35 stands in box to be transferred, have adopted the Standard. Shall want an extractor etc.

C. M. JOSLIN, M. D. St. Charles, Mich.

I examined several of my colonies the 20th of Jan. and found brood in all stages, from the egg to the hatching bee. One stock with brood on four combs. Lost none to date, though one hive has soiled its combs considerably. H. PEDEN, Mitchellville, Tenn.

From several similar items, we see it is nothing very unusual to find brood even in Jan., in the Southern and Middle states, whether this is desirable or not, we are unprepared to say.

Many thanks friend "Novice" for the binder you sent me, I never expected such a nice premium. We have every number of "GLEANINGS" in its proper place in the binder, and let me tell every bee-keeper, to get Emerson's Binder for "GLEANINGS," then they can preserve them for their children's children if they like. But "Novice" I never said "confound it" if I could not just find the desired number of GLEANINGS. No indeed! we always kept them in a drawer by themselves so that we always knew just where to find them. (Teach us order and precision and then ask such a question as per advertisement.)

"Novice" tells us to "have every comb built between one and the side of the hive" in order to have them straight, but it won't always work unless the old combs have brood or sealed honey at the top. I have had the old combs widened out so as to fill the whole space, and nothing put in the empty frame at all. I believe this will always happen if empty frames are inserted immediately after extracting. The remedy is, use the Standard hive, move back the division board just to give room for one frame at a time, move back the combs till you come to the middle of the brood nest, insert the empty frame there, and, Ho! you will have the whole frame nearly filled, with nice worker comb, and eggs too before morning perhaps. This should only be done when the bees are gathering honey nicely. Ila Michener, Low Banks, Ont., Can.

If it is only yourself that reads GLEANINGS, they might easily be kept nice "in a drawer," but we confess that we felt rather flattered a short time since in visiting several bee friends, to find the last number at one place conveniently on a stand with a pair of spectacles laid on the pages to keep the place, and at another the number, (although it had only been out a week) looked as if some urchin had used it for a spelling book during a whole term at a country school. It certainly had been *used*, and we went our way rejoicing. Friend Ila is right about strait combs, and we thank him for the correction. But beware of spreading the brood combs however, before the weather is quite warm.

Mr. D. Dubois, Newburg, Orange Co., N. Y., sends us an ingenious plan for a movable portico to be applied to any kind of a hive. It is made of two boards 4x11 inches, fastened together at the top like a letter A. Now imagine the horizontal cross bar on this letter, a button, with a screw through the centre to hold it up firmly to the hive, and you have it all. Each end of this button is made with a projection that enters a slot cut in each of the boards, but not quite through them. By boring a hole just above the button, we have an upper entrance, with the button for an alighting board; in the winter by turning this button perpendicularly, it closes the upper entrance. To keep the portico from slipping down, a nail is driven just underneath the peak. This allows us to make the upper and lower story just alike and yet have a portico *if any body wants one*. After testing hives with, and without, for two seasons past, we really cannot think it makes any difference either way with the honey crop. Our friend Dean says a portico encourages the bees in hanging out of doors, and he wants *his* bees in the hive. Now if the spiders should persist in making a new web in these porticos every morning, as they sometimes do in ours, we can easily lift them off and put them away. Some will probably always prefer porticos, while others will not, as in other things.

DEAR NOVICE:—Please say to the Inquisitive ones, through "GLEANINGS," that the \$34.45 mentioned on front cover of No. 6, Vol. 2, was the cost of the iron work mentioned in the same sentence, at the factory.

That the saws, bolts, belting, and lumber ran the bill for materials up to about \$18.00.

That I put the machine together myself, without adding to the figures.

That while the machine does do more accurate work, than I have ever succeeded in having done, by more portentous machinery; nevertheless, the idea of using human muscles, as the motive power, for the amount of work that looms up, prospectively, in the immediate future, does not correspond, very well, with the boasted ingenuity of this age and nation.

Therefore I am preparing to "attach" a lever horse power to the machine, by means of a belt thrown over a pulley, placed on the driving shaft.

This winter, in these parts, would do no discredit, to an arctic region. This morning the mercury fell to 40° below zero, and was still going down, when I took it in out of the cold; because it had reached (and in fact was a little below) the end of the graduated scale, at 40°. The mercury in the cellar, of late, keeps vibrating about, and near to the freezing point. Bees quiet.

D. P. LANE, Koshkonong, Rock Co., Wis. Feb. 9, '75.

How long will it take to feed 25 lbs. of sugar syrup with the Universal feeder to an average colony of bees in warm weather?

We have never tested the matter, because we deemed feeding a pint or a quart a day, more desirable in preparing for winter, than

more rapid feeding. If the bags were made to hold about a quart each, and were filled morning noon and night, or oftener, we could probably get them to take 25 lbs. in two or three days, in warm weather.

How will molasses hlds. answer for holding honey temporarily? Say, take one head out—thoroughly clean—heat in the sun—then coat the inside with hot wax, using a brush for the purpose. When the honey candies there will be no difficulty in getting it out.

We would advise trying the plan you mention. If you pour in a quantity of melted wax, and run it all over the inside, it will assuredly make it hold honey.

How long before you can give us a simple and infallible remedy for honey crystalizing? Such would be worth a good deal to me as my whole crop is sold in bottles and will not retail well in a solid state. For the present, will beating to the boiling point in a vessel set in water answer? Must the honey be bottled and sealed while hot or will it do as well when cold?

We find no trouble when we follow directions given heretofore, viz., heat your honey almost to a boil, fill the jars full, and seal at once, while hot, just as if it were fruit. If not made hot enough, it will candy again partially. We think the writers who say that *pure* honey will *always* candy, a little hasty.

The frames in my hives rest on a metal rabbet and are not secured at the bottom. They slide about very easily. When I send off a load of hives to an apiary, I secure the frames by placing half inch strips reaching to the bottom board between the combs at each end. It takes considerable time to fix them. Can you devise anything that will be less bother and answer equally well?

To be sure if we have frames perfectly *movable*, they must of a necessity be made stationery when we wish to transport colonies and the question arises as to whether it is advisable to be bothered with any arrangement for keeping frames fixed, every time we open a hive, just because we have once in a great while a case that makes such an arrangement desirable. In moving our bees to the swamp, see Vol. 1, page 75, we put strips between all of the end bars to the frames, except one hive which was overlooked, but as this hive had not been opened at all, the bridge of wax from one comb to the next, kept the frames all in their places. This is generally sufficient for moving short distances, where the combs have been in use several years, and where they have not been taken out for some little time before moving. In shipping bees considerable distances, we know of no plan better than the sticks. Something could be added to the hive for this when making, but would it be advisable, when the hive in many apiaries may not require to be moved in years? In moving the hives in doors and out, even with Metal Corners as well as rabbets, no preparation is needed, if the hives are carried so that the frames do not oscillate by the motion of stepping.

Are Basswood trees ornamental, and of rapid growth? Would they grow here? Our climate will admit of the culture of the hardier varieties of grapes.

G. C. MILLER, Mt. Hanley, Annapolis Co., N. S.

The Basswood is a most beautiful tree for ornament, and when it blooms the perfume extends for a great distance around. It is a very rapid grower when once started and we believe is perfectly hardy so far as frost is concerned.

Bees worked on rye flour all through the month of Dec., and most of the month of Jan., but are housed up now on account of cold. I have 68 colonies mostly in good condition, and think I will have same number when spring opens. "Long may you wave."

J. F. MONTGOMERY, Lincoln, Tenn.

DEAR NOVICE:—I am in favor of deep frames for these reasons: Experience has convinced me that bees winter better and breed earlier in deep than in shallow frames. In hollow trees; the natural home of the bee (and the one they like most) the depth is always greater than the width. In shallow frames they have to spread out so thin, or cluster on the cold honey, that it makes it much harder to keep up the necessary warmth. They seem to think they must have bees where they have honey; and I have noticed these outside guards often get chilled and die at their post. The natural place for bees to store honey, is in the top of their combs; and when they want to know what they have in store they look for it there; hence we often see them start from the cluster run over the honey as it estimating it then pass into the cluster, doubtless to report. When the honey is directly over them I think they are more fully impressed with its possessions. A hive 12x12 and 16 inches in depth I believe is the best size and shape for wintering. Such a hive will allow plenty of honey in the top and enough empty comb at the bottom for the bees to cluster on, and keep in a round form which is certainly the best. But it will be said shallow frames are handier—should we not try to please our bees as well as ourselves? Again they swing together too badly—cannot some fixture be made to keep them apart? What says Novice?

CHAS. WILKINS, Ott, Oregon. Dec. 4th, '75.

But bees die in hollow trees nearly, if not quite as badly as in hives; as new swarms generally select these vacated hollow trees, we forget that not one colony, but a half dozen may have occupied the tree in a dozen years. We know bees run over the combs, frequently, but we can hardly accept the idea that they do it exactly for the reason mentioned. We do not use shallow frames for the reason that they are handier. See pages 16, Vol. 1, and 29, Vol. 2. If hives and frames are properly made, they can be made to hang true even when 16 inches deep.

I wish to have all understand that my one dollar Queens are the poorest. My prices are for a Queen \$1.00, for a choice Queen \$2.00, for a tested Queen \$5.00. J. W. HOSMER, Jamesville, Minn.

The above was sent us by a subscriber, who had written Mr. H. in regard to \$1.00 Queens. We are alone responsible for Mr. Hosmer's name appearing in our list. He wrote us that he had been selling Queens for \$1.00 for some years; shortly after he sent us (we presume by mistake) 75c. the second time. As he made no reply in regard to a query as to how we should use this, we took the liberty of keeping his name in during the year.

We need hardly repeat that we never intended dollar Queens, to include such as had been tested and found poor; and we do not wish to include the names of any who propose to do this, in our list.

I make a hive, 12 frames about 11x13 inches, inside measure, frames, division boards, entrance blocks, bottom and cover, with one cotton cloth feeder as you recommend, painted three coats, all complete for \$1.50. If you wish, you can say through GLEANINGS that I will give one of my hives complete for a sample to any one that will send you a club of 10 new subscribers for GLEANINGS, from Canada, (no patent on it) for 1875 by your giving them the certificate showing that they have done so. D. A. JONES, Tecumseth, Can. Feb. 8.

Many thanks friend J. We would be very glad to offer you something in this case, but at 50c each there is scarcely any margin at all after paying expenses.

FRIEND NOVICE:—My hives are 15½ inches wide for ten frames; would they be any better if narrower? Will bees work as well in small frames for surplus honey as in boxes? Do you think the bee business will ever be over-done in the United States?

H. LINBY, Lewiston, Me. Dec. 14th, 1874.

If you mean that you put ten frames in a space of 15½ inches we should advise using

eleven frames instead of ten. If you mean 15½ is the length of top bar, we should consider it as good as any unless you use your hives two story, in which case a little longer frame might be better. Small frames put inside of larger ones, have often been tried but there are many difficulties; they must be made very accurately, to stay in place, the bees do not seem to like so much wood in their way, every thing is covered with propolis, and their owner generally concludes that the arrangement is too much bother to use on a large number of hives. We have just as much fear that too much butter and cheese will be produced, or too many eggs, as that the market will ever be overstocked with honey. What has been the result with small fruits? Remember too that they are perishable goods, while honey will keep safely for years.

In answer to J. H. Irwin in Feb. No., page 22: He can find as much comb honey in Langstroth frames as he may need, by writing Paul Dunken, Freeman, Cass Co., Mo. He has 500 to 700 frames.

W. G. SMITH, St. Louis, Mo. Feb. 4th, 1875.

I thought it was quite settled now that to raise brood, bees are obliged to have farina in some shape, but I was amazed to find what a quantity they consume, by starting my three colonies with only brood and 25 or 30 bees to a hive. I thought I was liberal in supplying them and they got on swimmingly at first, then the dead brood commenced appearing and I gave them more pollen and all went well again. I found out too that very young bees in an emergency like that, gather pollen as well as older ones.

ANNIE SAUNDERS, Woodville, Miss.

In '73 my bees paid in honey sold \$22.50, in '74 about \$12.00 per hive. I have had your experience for the last two years in the loss of bees.

H. W. MINER, Saranac, Ionia Co., Mich.

Excellent season for bees, had between 1500 and 2000 lbs. surplus in boxes. Sold, for from 18 to 25c per lb. Box hive man—can see no better way yet.

J. F. TEMPLE, Ridgeway, Lenawee Co., Mich.

GLEANINGS is indispensable, but my wife says I get some new hobby from every number.

Wm. H. ROOR, Fort Byron, N. Y.

Tell your wife that healthy, wholesome hobbies are always productive of good, and that we shall always strive to have GLEANINGS teach none other.

Can I make a bee hive and use a movable frame such as Mr. Quinby describes, without paying for the individual right? And if I have to pay for the right, who is the proper person to be paid? and how much will it cost to make and use for myself, say one or more?

T. H. APPLE, Meadville, Pa.

We are happy to be able to say that you may make hives, in any way you desire, so far as we know, without the least necessity of paying any body a right for any thing.

We got up a resolution at our convention, to apply to our Legislature for a law to label all packages of honey with the producer's name, and let the seller be responsible for adulteration, if not mentioned,—subject to a penalty when detected, etc., etc. Can you give us advice how to act?

M. QUINBY.

We do not know that we are able to give any advice in the matter. Would not the law like many others be dropped and forgotten because no one would enforce it? It seems to us that the great work is to educate consumers to know honey and to demand it. This is all that we have to rely on in a great variety of goods, and that establishment that once gets a name of dealing only in genuine commodities, has its fortune made. People are learning rapidly. If any one likes the cheap honey let them use it.

I have given my bees some rye flour, they take it first rate, for the last two days they have been carrying it in pretty freely. It is bolted flour such as the bakers use. Is it as good as the unbolted or not? I have not lost a colony yet and they all have sealed honey enough to spring them I think, but I have commenced to feed for brood rearing; feed syrup made of white sugar.

Now friend Novice, I want some advice. I want to adopt some other hive than the Buckeye, but I want a two story hive that I may procure, not box honey, but frame honey, and I want the frames in both stories alike so I may use them interchangeably.

T. B. PARKER, Goldsboro, N. C. Feb. 1st, '75.

The bolted fine flour, is just as good as the unbolted, except that the bees sink down in it. If mixed with bran or sawdust it does very well. When they can choose, bees always prefer rye and oats, to wheat flour.

Use the Langstroth frame by all means, if you are going to have a two story hive. If you have not seen the L. frame you had better have us send you a sample by mail. We should also use the Simplicity hives to hold them, for then you can have both stories also, just alike, and perfectly interchangeable. We can furnish a one story hive, frames, quilt, and all complete for \$1.75, and two of these makes a complete two story hive. We decidedly prefer the L. frames for two story, on account of their shallowness, any of the other frames loom up so tall when placed one above the other. We think we have ample evidence that the Langstroth hive winters equally as well as any deeper frame in any climate.

Our only reason for giving a preference to the Standard frame over the Langstroth, under any circumstances, is that more than 10 L. frames, placed side by side, make a hive inconvenient to make and inconvenient to handle. Therefore if you are going to get your surplus above the brood combs, use the L. frame every time. The Quinby would come next to it, as it is much the same thing on a larger scale, but the American, Gallup, or Standard, are not suitable to be used two stories as a general thing. Single instances 'tis true, may sometimes seem to point otherwise, but we have gleaned the above from a large number of reports extending over several years. Any of the frames will we think, work very well on the plan given on another page by friend Joiner, but the last three mentioned would stand a little the most compactly.

Do you believe a pure Queen fertilized by a black drone will produce pure drones? and do you believe pure Queens fertilized by such drones, will produce pure stock, and do you allow such drones in your Apiary? What would you charge for—say 3 cards 4x5 inches each of drone comb filled with fresh laid drone eggs from your imported Queen, with bees enough to keep up the heat, and send by express in May next?

GEORGE R. HUFFMAN, Ellingham, Ills.

So much time has been wasted in discussing this question that it is questionable whether it be best to hazard an opinion, until we can be sure of solving the question positively. If a black Queen could be fertilized, *beyond mistake*, by an Italian drone, we might readily decide the matter, for we should then have one or two banded workers, and black drones invariably. Will those who are equal to this task, if any such there be, please experiment and report. Will. R. King, of Franklin, Ky., did claim to have made such an experiment, but evidence was brought forward almost immediately, showing that his statements were only a series

of falsehoods. [See page 93, Vol. 1.] We see no reason at present to doubt the experiments of Langstroth and Berlepsch; besides we find Italian workers, in almost all Apiaries of black bees in our vicinity, but the colonies producing them show only black drones.

So long as our object is honey, and we only procure Italians because they gather *more* honey, we cannot see that the question matters particularly either way. Every Apiary of 50 colonies should have at least one Imported Queen, and all colonies should be made with Queens reared from this one. You will then have good bees in every hive without bothering about drones at all. All Apiaries of less than 50 stocks can have an Imported Queen's daughter—as they cost but \$1.00 each, you can buy 4 or 5 if need be, until you get one whose workers suit you. Every one who rears Queens for sale should *certainly* have an Imported Queen. At the low price at which they are now offered there is no excuse for such blundering, and if our readers would decide to patronize none but those having *bona fide* Imported Queen mothers, advertisers would make haste to supply themselves. The plea that Imported Queens do not always produce three banded workers, we think a mistake. All the reports from Queens of the Nunn importation agree without an exception that the workers are not only three banded, but that they are quite superior as honey gatherers. James Bolin's letter just at hand is a sample of one of them.

The idea of judging a Queen by her looks and granting a diploma etc., on the strength of it, is simply ridiculous. Concerning Imported Queens, I would say that I obtained one of friend Nunn and if there are any better ones anywhere I would like to know it. Her progeny and those of Queens reared from her are the very best workers I have in my Apiary.

JAMES BOLIN, West Lodi, O. Jan. 7th, '75.

Friend H. had better have sealed drone brood instead of eggs, it can then be sent safely by mail without bees. We can send it at the same price we do eggs from our Imported Queen, viz., 25c for a piece 2x3 inches. We have little faith however that the drones can be made available.

I have a hot-bed and my bees are doing well in it. I have about 60 plants in it, I think they help the atmosphere a great deal.

A. N. DRAFER, Upper Alton, Ills. Feb. 1st, '75.

My boy had when we came here a small box of sunflower seeds, which he kept as one of his playthings, last spring he accidentally spilt them down in the garden by the fence, and, old as they were, they came up profusely. They looked so thrifty, I took it into my head I would transplant them. I went to work and set them all around in the fence out of the way where there would nothing else grow to advantage, and if you will believe me, I had an enormous crop; and behold when they blossomed the bees went at them in earnest, and after the bees got through with them, there were several quarts of seed. I sold a dollar's worth to my druggist, and the balance I fed out to my hens, and as a writer of old has said, I found nothing so good and nourishing for laying hens as sunflower seeds. Then I cut off the heads and place them near the bee hives, fill them with sugar and water, and that suits the bees to a T. So you see I was to no expense, and they paid well, I write this that others may be benefited as well as myself, by so doing.

Common sense, philosophy and religion, alike teach us to receive with becoming reverence, all undoubted facts, whether in the natural or spiritual world; assured that however mysterious they may appear to us they are beautifully consistent in the sight of Him whose "understanding is infinite."

DR. R. HITCHCOCK, South Norwalk, Conn. Feb. 2nd

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. III

April, 1875.

No. 4

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

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Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

*[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]*

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Southern Farmer,

Scientific American.

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EVERY one seems to have deserted the Hive Manufacturer's Department, yet a smart man, assisted by a boy a dozen years old, can make from 8 to \$10.00 per day making Simplicity hives at \$1.00 each, with even a Windmill buzz saw such as we use. We sent a large lot to E. W. Hale, Wirt C. H., W. Va., one year ago, and we have just shipped him 40 more this spring. At least each state, should afford a hive manufacturer, to avoid shipping such long distances. You really don't mean to let us get *all the money* for making dollar hives?

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpareil space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

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ALL

Bee-Keepers who wish to learn how to more than **double their profits** from their bees, should send 25 cts. for a copy of "**MONEY IN THE APIARY**," a little work on practical Bee-culture, just issued. Runs no patent hive nor other humbug. Tells **what to do, when and how** to do it, to insure success. Send for it **now**, before laying out plans for another season's work.

Address HERBERT A. BURCH, South Haven, Mich.

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Full Stock, \$15.00. Tested Queens in May, \$1.00 each, after June 1st, \$3.00 each. Warranted Queen in May, \$3.00 each, after June 1st, \$2.50 each, or six for \$12.00. Bred from Imported and Selected Stock. Sent by mail. Also, Eggs from Light Brahma Fowls, \$1.50 per doz.

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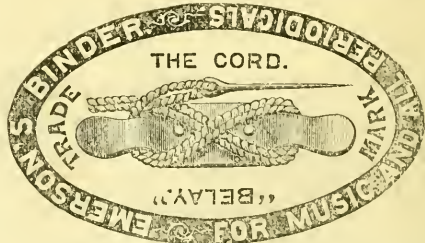
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tfid KRUSCHKE BROS., Berlin, Wis.

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FOR one Colony of Italian Bees \$15.00; four for \$50.00. Also tested Italian Queens, Hives and material for Hives and surplus boxes at *very low figures*. Price list free. J. S. WOODBURN, 21-2 Dickinson, Cumberland Co., Pa.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY, 1tf Colerain, Franklin Co., Mass.



You cannot look over the back No's of GLEANINGS or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—"Dear me what a bother—I *must* have last month's Journal and it's no where to be found." Put each No. in the Emerson Binder as soon as it comes and you can sit down happy, any time you wish to find any thing you may have previously seen even though it were months ago.

Binders for GLEANINGS (will hold them for four years) gilt lettered, free by mail for 50, 60, and 75c, according to quality. For table of prices of Binders for any Periodical, see Oct. No., Vol. 2. Send in your orders. A. I. ROOT & CO., Medina, O.

Now in place of rearing new Queens a month or a little more later, would it not have been policy to have kept them in some way? Perhaps our friend did so, or may be those 26 were all poor or too nearly black. It has always seemed to us a great loss, to kill a good Queen, at or near swarming time. In regard to feeding sugar to get combs, we have here another direct experiment to show that combs can be secured by feeding, at an expense for the sugar of not over 40c. each per comb. Those who are anxious to build up an Apiary rapidly, can certainly make it pay to feed, while the bees are gathering nothing. The plan of locating the hives permanently on cars, is ingenious, and may be quite practicably substituted for securing the same results we were aiming at in Problems, 17 and 27; for instance, our own Apiary of 66 colonies could all be located on three cars, and with proper facilities could easily be run out to their respective summer localities in less than 10 minutes, or so quickly that not a bee would have time to get out of its hive and get lost. Such machinery with a wintering house of capacity for three cars would however, be rather expensive, as in fact are all of the three plans alluded to, and we fear that for many years to come, THE GREAT UNSOLVED PROBLEM IN BEE CULTURE will be, how best to give our bees *all* the advantages of both out and in-door wintering and at the same time avoid either lugging the hives about, or investing in expensive and complicated machinery. Is it quite impossible that we may all eventually come around to thinking that we should on an average encounter the least number of evils, by undertaking to winter only *very strong* colonies, and these on their summer

stands? and in connection may we not find that hives with half inch walls, are just as good for *such* stocks as any other? If we find it policy to use straw mats or chaff over the cluster, we certainly shall not need to pay any one for a right for so doing.

126 COLONIES WINTERED, AND ONLY ONE LOST.

OUR FRIEND BOLIN STILL AT THE HEAD.

FRIEND NOVICE:—In preparing my bees for winter, last fall, I found one stock Queenless, and having no surplus Queen on hand to supply the deficiency, I united them with another stock. This left me 124 colonies, which, together with two light swarms belonging to a neighbor, that he proposed my taking and wintering for one of them, were put in my bee house Nov. 21st. They remained in it until Feb. 24th, when they were put on the summer stands. I found the entire 126 colonies alive, and with the exception of four swarms, that are somewhat weak, in good condition. They had a good fly and the weather turning cold the next day all the weakest colonies were put back in the house. They were carried out again March 13th.

While they were in the house the last time, my weakest swarm starved, by clustering at one corner of the hive away from their stores. The rest are all doing well. Many of the hives did not have much if any more than a spoonful of dead bees in them when carried out.

With the exception of two or three of the weakest, that have only eggs or larvae, they have brood in all stages, from eggs to young bees hatching out. The stock containing my Nunn Queen is one of my best and is, I think, stronger than it was last fall, when put in winter quarters.

The Queen commenced laying in Jan., and when taken out, Feb. 24th, the hive contained hundreds of young Italians, and more are hatching out daily. Breeding, while in winter quarters, does not seem to have had any deleterious effect on the health of the bees, as there were very few dead ones in the hive when put on the summer stand.

The two light stocks belonging to my neighbor being short of stores, I kept them for some time before taking them out of the house on candy. They seemed to do as well as those having natural stores.

I put my double width hives in with the rest, and the bees in them came through in splendid condition. They were very strong in the fall, and I think the extra space in the hives was an advantage, as the bees were not as warm as they would have been if all had been forced into a common sized hive, as I did one year ago. The thermometer in the wintering room varied from 34 to 56°. It reached so low as 34° but once, and that for only a short time. It generally stood at from 38 to 42°. During the coldest weather I closed the lower ventilator to the room, and sometimes kept it closed for a week at a time.

Notwithstanding we have had but a few days in which bees could be out of their hives, mine have seemed determined to improve the time, as they have carried in over a bushel of rye and oat flour.

JAMES BOLIN, West Lodi, O. March 18th, 1875.

There! We shall now have to admit that friend B's success is something more than accidental. Isn't it funny that after all our bother about cold frames, we just begin to discover that young bees *can* be reared in dark winter quarters, and have the colony stronger in numbers when they come out than when they went in.

In regard to brood rearing in-doors, and, keeping combs of pollen over winter, we have the following:

For a special purpose 10 or 15 stocks had *new* empty combs last fall in which to store their winter supply—were fed in season on sugar syrup and arranged for winter with balance of stocks, were placed in cellar about 12th of Nov.,—all remained quiet until about 15th Feb. when two of them set up a *fearful* roaring. About 1st of March found these two were showing signs of dysentery. We thereupon made a frame 2x2 ft. square, covering sides with paper and tops with mosquito net. Then brought up a colony and placed hive with entrance corresponding with one in frame—and let them "go it." 'Twas fun to see them fly, showing

how much they appreciate their liberty. Temperature of room 40 to 70°. After a two day's fly, opened them and found the Queen had occupied 20 square inches with eggs (this being one of the no pollen stocks) but no larvae. Returned them to cellar and now they are as still as can be. The other stock rec'd like treatment and were found in same shape. Gave each stock a frame of pollen (which has been kept in our bee house since fall, all right) before replacing in cellar. J. OATMAN & CO., Dundee, Ills. Mar. 16, '75.

P. S.—Since writing you—have examined the two stocks—and the one which had the cluster of *eggs only, now has one frame, more than one-third full of larvae, some most ready to seal; so much for pollen.*

THE CANDYING OF HONEY.

THE following very valuable communication comes from an esteemed correspondent who is constantly employed in the honey trade of one of our large cities.

As for candying of honey, we are still troubled with it, though not nearly so much as we were. If we were not putting comb and extracted together we would be all right, as the sealing while hot will prevent the candying, but when comb is also put in the package it will candy, but will remain all right fully twice as long as when put up cold. My experience is the same as yours on extracted sealed hot—sealed at 170° or 180° is sufficiently hot. I have some with comb in (1 lb. tumblers tin foil tops) since Dec. 26th, three samples put up at 140, 150, and 170 degrees; the 140° was candied hard a month ago, 156° is almost all candied now, but the 170° only shows slight commencement in candying. In cutting comb, say I have one piece that is not candied but there has been a little honey run to the bottom of the box and candied there. I put in one tumbler, a piece with none of this on it, in another I put a piece with some of this candied honey adhering to it, say twice the size of a pea. I seal them both up exactly alike, the result is that the one already started in candying, will be solid before the other shows any signs of a change. I have fully tested it and find that the virtue is in sealing *while hot* and not in being heated to a certain degree. I tried an experiment to learn whether honey would candy sooner in a cold room than in one heated during the day and cold at night. I placed four glasses in a box in the yard, four in a room where there was no fire, (temperature most of the time about freezing; four in the room where we work, warm during the day and cold at night and on Sundays. About the only difference I could see was that what I had in our working room did not candy so evenly as the others—but all candied in about the same time. I don't think these men that know so much (or rather think they do) about honey candying, ever consider that there is a vast difference in honey, even honey taken from one hive in one season. We have honey from Winchester, (Oliver Brown's) that was taken late in the season, that is candied solid in the comb while some honey from the same Apiary taken two months earlier shows no signs of candying, the latter is from blue thistle and clover while the candied is from a late weed called in Virginia—"Good bye summer," and by some known as iron-weed.

On the 9th of Nov. I filled a 3 lb. jar with California sage, comb and extracted and as yet it shows no signs of candying.

Our California honey is at present so thick that a tumbler containing it may be inverted without even disturbing the surface and yet it is as clear as crystal, and to *our taste* the most delicious of all honey. We have several times of late been cautioned against praising this honey as we may thereby injure the sale of our own, to which we reply: What would you think of a merchant who would keep desirable goods in the background because it was more profitable to sell others? Is it "doing unto others" etc.? Shall we not consider *all* mankind as brothers equally?

OUR OWN APIARY.

MARCH 5th. Humiliating as it is, we must confess that we have allowed a colony to starve. They were in the bee house—were

light when put in, and we proposed to watch them—have watched them, and we even went in with a couple of heavy sealed combs about the middle of last month, to make them sure, but on turning up the quilt they looked so quiet, with plenty of sealed honey near them, that we hesitated to disturb them, and set down our combs and went out, thinking they would “go” until time to take them out. To-day we find all the honey gone and the bees dead. The lamp nursery revived some of them partially, but it was too late. Now here is a queer feature; this was a fair colony and the bees were in splendid condition, but the dust that Quinby mentions on the bottom board was almost entirely missing. Although they had been housed nearly 4 months, the bottom board contained scarcely a tea-spoonful of accumulations of matter of any kind. We confess now, that we are inclined to think that bees in the *most perfect health* void nothing in the winter at all. We might feel inclined to blame friend Bolin, for the above loss, because he advises not to disturb them, but we guess we won't, for it would be better to let the one die, than to injure all the rest by disturbing them while we were giving this one a comb of honey that might quite as well have been put in last fall.

March 15th—The weather being very warm, we have to-day set our bees on their summer stands. With the exception of one more that had starved they are all in excellent condition. In fact we are sure we never before owned so many bees in the middle of March as we do now, and thanks to the Imported Queen they are all yellow ones. She has been worth already at least \$100.00. The bees were all put in the house Nov. 3rd, (see page 136, Vol. 2.) “as dry as a chip,” and they all came out to-day, as dry as a chip. Guess we'll hold on until May, before we tell you just how to winter bees, but we feel sure it won't be under glass.

March 15th—We have had some severe cold weather, but the bees that were in the bee house, and those that were out all winter, are all in excellent trim, while all but two, in the forcing house are dead. Keeping a fire might have enabled them to hold out a little longer, but as they had buzzed against the glass, until only mere handfuls were left, what is the use of going farther. Colonies no stronger, that were wintered in the bee house are now in beautiful order and none of them show any disposition to leave their hives in unseasonable weather, while the poor inmates of the forcing house latterly, have hied out never to return, at every glimpse of sunshine. 'Tis true only one of them was really fair, (the Quinby hive) and to save them, we have left the south side permanently open. Haven't we got a nice place to feed meal—plenty of sunshine and no wind. If we allow the bees to “get out” it may do to keep them in after all.

March 24th—Very cold and wintry, (even below zero) yet we have lost but one colony, and they had the dysentery. Examination showed that their stores were all *unsealed*. This was evidently some bad management in the fall, yet we hardly know how. Inmates of the forcing house are now all gone except those of the Quinby hive, and they are “beautifully small.”

March 25th—Standard hive has bees in all stages and young Italians just hatched. One special colony that was built up last fall entirely on sugar syrup, with the Universal feeder, seems to-day precisely as good as they were in Oct., last; they were wintered in bee house.

VARIOUS MATTERS.

BY G. M. DOOLITTLE.

OUR bees were confined the past winter, from November 10th to February 23d, (which was the longest we ever knew them to be since we wintered on the summer stand,) yet they did not suffer, except four or five in which the quilt got wet from some cause, so as to be frozen solid like ice. These spotted their frames and combs some. We found more brood in the hives this season than we ever knew before so early. Some hives had to the amount of 200 square inches in all stages, with plenty of young bees, and there was not a hive (Feb. 23d) that did not have some in. We found two Queenless and united them with others, so we have at present 98. We must tell the readers of GLEANINGS how we have introduced our Queens for the past two years, without a single loss. Make a cage as described by Novice in the *A. B. J.* for caging Queen cells, namely: take a piece of fine wire cloth about three inches square and cut out each corner in a square form $\frac{3}{4}$ of an inch, then bend up the four sides and unravel the sides down half way and your cage is ready. Remove the original queen from the stock you wish to give a new one, then place the queen to be introduced on a comb in the center of the cluster where there is honey sealed or unsealed and put the cage over her, pressing the points into the comb as far as they are unraveled, do not put a cage on the other side, as he recommended in *A. B. J.*, but take your knife and worm it through the comb into the center of the cage, and the work is done. In removing your knife be careful not to remove the wax or honey. The bees by licking up the honey and removing the wax become acquainted with the Queen and there is no harm done if you do not remove the cage in a month.

Now GLEANINGS we want a little light about those imported Queens that Novice tells us about in the March No. We sent Novice, as you will remember in July for eggs from his imported Queen from which we got two fine cells. Well, one Queen got lost from some hook or crook but the other we have at present. Now were those eggs from the imported Queen? The Queen we raised from them has but very little yellow on her and three-fourths of her workers are as black as soot. The first Italian Queen we ever saw was introduced some time in July and did not raise a drone that season, neither was there an Italian drone within 12 miles of her yet every one of her daughters were duplicates of herself and never produced a black bee. There were hundreds of Queens raised from her during 3 years yet none of them ever produced a black bee. Also, see GLEANINGS for Nov., page 132. Workers produced by the Queens referred to above, are as good honey gatherers as any we could wish. Why does a certain Queen breeder tell us in the *A. B. J.* that Queens from a pure mother mating with a black drone will produce a part Italian and a part black workers? In conclusion, we would say as we did in the *A. B. J.* in 1871, “Black bees are not Italian and coal is not chalk but humbugs are plentiful in some localities and so with impure Italians.” Please ask Novice if he considers the Queens we have been breeding from as good enough to raise \$1.00 Queens from.

Borodino, N. Y. March 8th, 1875.

[All the eggs sent out last season were assuredly from our Imported Queen, and we can give no explanation of the matter unless your bees cheated you with a larva procured elsewhere. That they sometimes do this we have ample proof. Dollar Queens are to be reared from the best stock we can get, and he who gives best Queens for the “dollar” will probably get most orders. We prefer an Imported Queen, if they are all like the one we purchased last season, the one we have now. We shall have a Queen from Dadant soon, and shall then be able to give further testimony. As friend D. urgently invites bee-keepers to pay him a visit and select their own bees, it seems that he has full confidence in imported stock. Probably 50 Queens were reared from our Imported, last season, but we have not as yet seen a black worker among their progeny, although some of the young Queens are very dark. We fear that we shall never be satisfied with any other, while such are to be had.—Ed.]

RAISING QUEENS FROM EGGS.

NOVICE:—Two years ago the coming spring, we sent to you for some comb and eggs, from which we hoped to raise some Ohio stock, but after waiting a long time and hearing nothing from either *Novice* or eggs, we sent to T. G. McGaw, Monmouth, Ill., who live about 225 miles from us, and in a short time received a piece of nice new comb containing fresh and good looking eggs. Thinking we had the thing all in our own hands then—judging from our reading—we inserted in a previously prepared nucleus and left them to themselves 24 hours, then examined—when lo and behold! every *miserable little egg had gone*—who can tell where to? We closed that hive feeling not so sure we had the thing so much in our own hands, and not to be discouraged by one failure we sent for more eggs, which came promptly to hand and were duly inserted, *this time* putting them with two different stocks—prepared in different manner. After waiting 24 hours, we with trembling limbs went to our examination and “plague take the little critters”—if they hadn’t done away with every egg again and “nary” a cell. We therefore wrote Mr. McGaw explaining state of affairs and requested him to send us a piece of comb with *just hatched larvæ* which came to hand in a short time and was inserted as previously. Knowing how *anxious* we were to succeed in this matter you may *imagine* our feelings on going to make the examination after the 24 hours had expired. We finally mustered courage and looked inside and *jolly* to say! there were three or four nice healthy looking cells begun, the result of which were nice Queens. Not wishing to jump at conclusions by imagining we had found the goal—because we had succeeded in this one trial after failing twice—concluded to try again. Upon arrival of combs and larvæ we immediately inserted as before and *again* we were treated to *several* nice Queens, and one of these same Queens is now among the *very* best breeders and honey gatherers among all our bees.

Our experience has satisfied us the egg business is a failure—but nine out of ten times *larvæ* will succeed. Try it and report.

Our 110 colonies “yellow boys” in cellar are doing nicely. J. OATMAN & Co., Dundee, Kane Co., Ills.

We agree with you exactly friends O. & Co., but you can only succeed even with larvæ during warm weather. Beyond a certain temperature say about 60°, they are hopelessly chilled; again, very small larvæ should be selected, and such as have been bountifully supplied with food, especially if they are to be sent long distances. Remember these little “innocents” are ordinarily fed a great many times a day. We have imagined that where there were but few small larvæ, in a fair colony of bees of the proper age, they received a more abundant supply of food. Our efforts met with so much success last season, that we shall be prepared to again send small larvæ in a wooden box to all who may apply, as soon as the weather is warm enough. We shall send all from an imported Queen. We think it will be safest, for all to send to some one as near them, as may be practicable.

AVERAGE NUMBER OF DAYS REQUIRED TO GET LAYING QUEENS.

DEAR NOVICE:—Looking over some memoranda of 1871 and ’72 which were kept for no other purpose but convenience at the time, I find the time was noted when brood was given to a nucleus or Queenless colony, also the date when a Queen hatched out, and the date when she commenced to lay. Of 33 Queens thus noted in 1871, and 16 noted in 1872, or 49 in all, I get these results. Counting the length of time from giving brood to hatching of Queen,

2 hatched in 12 days,	9 in 16 days,
6 “ “ 13 “	4 “ 17 “
15 “ “ 14 “	2 “ 19 “
11 “ “ 15 “	

One Queen began to lay in 5 days from being hatched, 3 in 7 days, 5 in 8 days, 16 in 9 days, 12 in 10 days, 7 “ 11 “, 4 “ 13 “, 1 “ 15 “

Counting the total time from date of giving brood to laying of Queen,

1 began to lay in 18 days,	3 in 21 days,	4 in 22 days,
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7 in 23 days,	15 in 24 days,	5 in 25 days,
4 “ 26 “	5 “ 27 “	2 “ 28 “
1 “ 29 “	1 “ 30 “	1 “ 32 “

From the time brood was given till the Queen was hatched out the average length of time was in 1871, 15 days; in 1872, 14½ days; for both years 14 41-49 days.

From the time the Queen was hatched till she began to lay, the average was in 1871, 9 20-33 days; in 1872, 9 13-16 days; in both years, 9 33-49 days.

From the time brood was given till the Queen laid, the average was in 1871, 24 20-33 days; in 1872, 24 5-16 days; in both years, 24 25-49 days.

B. LUNDERER, Chicago, Ills. Feb. 23rd, 1875.

Many thanks “B. L.,” for you have certainly given us a faithful record of an important matter, whatever “blunders” you have made elsewhere. We have generally estimated that where a Queen was killed by a careless Apiarist, or where the bees were from any other cause, compelled to raise a new one from their brood, the colony would be destitute of eggs for at least three weeks on an average. If this loss occurs during April or May, it generally spoils all hope of either surplus or increase, of any account, during the season.

Advising to re-Queen all colonies during apple bloom, as given in “Money in the Apiary” would, judging from our past experience, be almost if not quite equivalent to the loss of a swarm from each colony. Giving the colony a Queen cell instead of larvæ saves about 9 days of the 24; giving them a virgin Queen just hatched, about 14 days out of the 24, and we know of no way of shortening the 10 days remaining, unless it be giving the colonies every third day during this interval, a comb containing eggs only, from some other colony. These eggs can be obtained by putting an empty comb in the center of a prosperous colony over night or may be a little longer. We should bear in mind that we are always losing, during the spring months, when we have a good Queen without bees, or a good colony without a laying Queen, and that many times the deficiency may be best made up for the time, by moving eggs, as advised above. Removing and introducing Queens in the spring, we have always found hazardous.

A FURTHER IMPROVEMENT IN STRAW MAT MAKING.

T J. DODDS, of Le Clair, Iowa, sends us a neat little model of a machine for making good mats, rapidly. Suppose you lay three pieces of wood say 1½x2 and 3 feet long, on the floor side by side. For a Langstroth mat, they should be about 3 inches from each other; to keep them in place a strip of board is let in to each end, and this may be arranged so as to allow the distance between the bars to be varied at pleasure, where different sized mats are to be made. In mortises made in these bars, six uprights are firmly secured, two in each bar, and their distance apart governs the length of your mat. Now if you spread your straw on these bars, between the uprights, it is in a proper position to sew, but to press it down flat, compact, and even, we use three more bars just like the first, and mortised so as to slip loosely over our uprights or stakes as they might be termed. Now if there are holes in these stakes, we can put a pin through above the bars, and squeeze the straw down hard and firm to be sewed. We will let our friend tell the rest.

To-day mailed model Press or frame for making straw mats, one-fourth working size which will talk for itself. To make the mat in this press you simply fill in the straw up as high as stakes loosely, and long enough to trim off nicely. Put on your center rail first, press them on, then put in your keys. If you want to make solid mats (which I think best) while putting in keys, use a wooden mallet, and hammer lightly on the rails and also on straw between rails; it will equalize and straighten the straw. We now fasten in saddler's horse horizontally,—any vice will do—and get a straight sacking needle 4 or 5 inches long and sack or broom twine. Sew as per sample, broom stitch. Put twine round slack, slant needle length of stitch and merely draw stitch up, and you will have a smooth face. Saddler's stitch leaves it very limber one way. To trim off, take out keys, slip mat back until out-side seam comes inside rail and cut off close to rail. Saddler's round knife comes the handiest to use as it is an implement of my profession and a working tool of that department.

This mat makes a good division board and side boards to Quinby hive it made solid. Straw set horizontally. T. J. DODDS, Le Claire, Scott Co., Iowa.

A BEGINNER'S TROUBLES.

SEASONABLE SUGGESTIONS.

I HAVE six stands of black bees and five are in movable frame hives (or meant to be such) and they have not built more than one or two combs strait in the frame, in each hive. What am I to do? I can not take out frames and place them in other hives the same distance apart without paring the comb down and that would damage them would it not? My frames are placed in the gum 17-16 inches from center to center of each frame, is that the proper distance? Now if you will give me a short lesson on these first principles, or tell me where I can get the proper instructions I shall be very thankful.

ALFRED COX, White Lick, Ind. March 22nd, '75.

Bless your heart friend C., your task is comparatively an easy one if you have but 6 colonies. If one comb is straight in each hive, you are fortunate. Now, while but little honey is in the way, is your best time; get out one comb first, the one that will come easiest, and make that just as good as it can be; with a thin knife and some splints, put every comb just as it should be and keep it there until the bees fasten it. Never mind the trouble, for when you once get a set of good combs they will last a life-time. Paring the combs down will do no especial harm, but we think it a great mistake to attempt to have the combs fixed at exact distances apart. The average distance should be, it is true, $1\frac{1}{2}$ inches or a little less, but it will do no hurt at all, to give very thick combs $1\frac{3}{4}$ or even 2 inches, in some cases, until the bees have cut them down, as they will do when they use them for brood rearing. The use of the Extractor enables us to bring all combs into nice shape very easily, and above all it enables us to take the honey out of their way instead of allowing them to bulge out the combs and fill every little cranny in a way that is very poor economy for both them and their keeper, besides the bother of having combs like yours friend C., that are not removable. When combs are built across, cut them out, and fasten them in frames as in transferring; every time you open a hive, bend the combs into place, and see if you cannot make them a little better. You will soon have them so that you would laugh at a patent right man who should tell you you needed a movable side, or board, or something to take out to enable you to get the first comb out. If you have closed top bars or sides, to keep the combs at fixed distances, or even nails or any kind of projections, we should advise clearing all these out of the way at once, that is if you

want combs that really are *movable* at pleasure.

HARBISON'S HIVE.

DEAR NOVICE:—I enclose you a cut of Jno. S. Harbison's "California Bee Hive," patented Jan. 4th, 1859. The hive has been used in the Eastern States to some extent. Last Dec. while at New Castle, Pa., we met Mr. Harbison and gained some very valuable information from him regarding the honey resources of Cal., and his experiences in Apiculture there. Mr. Harbison is very pleasant and gentlemanly in his manner and his untiring perseverance in Apistic pursuits in the face of all difficulties has well earned for him the title of King of Bee-keepers. He has been at heavy expense the past season, nearly \$20,000 was used in his business this year, a large portion of which went to the construction of roads through the rugged mountain country to his Apiaries. He has over \$50,000 invested in his business, and this large capital backed by knowledge of bee keeping rarely attained, and an indomitable energy is the secret of Harbison's success. He has combined many good points in his hive and uses the same hive with no changes except making the hives tall enough to hold three tiers of sectional honey boxes and for his own Apiaries dispenses with the glass and places these boxes on, so the combs built on the sections are parallel with the frames of the brood apartment beneath them, and when the first set is partly filled he raises them and puts empty ones under them. There is space enough to allow bees to pass up between the open ends of the sectional boxes and the sides of the hive. This being the only means of access, the queen scarcely ever ascends to deposit eggs in the supers. The Harbison hive is made of 1 inch lumber, is $15\frac{1}{2}$ inches square (outside measure) at the base, and stands 29 inches high. The back of the hive is a door, hinged at one side. The top is also hinged and swings forward. When top and back are opened, and surplus boxes removed, the frames can be removed by turning them backward, allowing them to turn on the back lower corner, which is a tenon fitting a mortise in a sill, or cross stick. The upper front projection, or resting point of the frame, is a nail which projects $\frac{1}{4}$ of an inch, and fits in groove in front board $\frac{3}{8}$ of an inch. Lower down, near the bottom of the frame another nail projects $\frac{3}{8}$ of an inch and these three are the only bearings of the frame. The hive takes nine of these frames and contains about 2200 cubic inches frame capacity. The frame has no bottom bar, but one about half way up takes its place. Thus the bees reach the combs on entering the hive without having to come in contact with a bottom bar. Mr. Harbison has not only had the difficulties of establishing his Apiaries to contend with, but the Eastern markets were considerably spoiled by untrue statements and false ideas regarding the extent of the California honey crop for the past season. The crop was undoubtedly a large one, but numerous articles far overstated Mr. Harbison's own crop, while Commission houses were writing East giving quotations for car loads, expecting to purchase from him to fill orders. Mr. Harbison protests against this banking on his capital.

D. LYONS BROWN,

Indianapolis, Ind.

March 24, '75.

As the Harbison Hive embodies nothing that would, in our opinion, render it particularly superior to many other hives, we have decided not to give cuts of it. Very likely Mr. H. having been long accustomed to it, finds it easier to use than any other, but our friends who have been accustomed to the simple Langstroth hives, would probably think his complicated. One of the Harbison hives has been used by a neighbor of ours for many years, but he, although a successful honey raiser, much prefers the L. That the hive makes really but little difference, may be gathered from the fact that our three great Apiarists, who handle over 1000 colonies each, all use a different hive; Harbison, his own, Hetherington an 8 frame modified Quinby hive, and Grimm, an 8 frame Langstroth hive. As we have said before, if you have many hives of one particular kind, and they are *movable comb*, very likely, you had better continue to use them, unless they are too badly "patented."

Gleanings in Bee Culture,

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EDITORS AND PROPRIETORS

MEDINA, OHIO.

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For Club Rates see Last Page.

MEDINA, APR. 1, 1875.

DEAR FELLOW BEEKEEPERS:—Although well aware that you have subscribed for a journal devoted exclusively to bees and honey and that I really have *no right*, to occupy this space with another subject, under the circumstances, yet I hope you will excuse me for suggesting that none of you truly enjoy bee-culture in its highest sense, until you feel with every breath, that these wonderful insects are like ourselves, are the work of that Great Being who rules over all things; that they are only for a time entrusted to our keeping, and how very wrong it is for us to get angry at the little fellows, should they not always understand our kind intentions; how very wrong it is for us to feel an interest in them only so far as they can be turned to purposes of gain? Can you not feel that He who created us all, feels an interest in us still, and that when he placed us at the head of all creation, he did not intend we should stumble through life the helpless victims, of anger, jealousy and a host of vile passions? Can you not believe that He is ever near us, ever ready to lend a helping hand, always willing to give us strength to triumph over our weaknesses, and to be true men and women deserving of the great trust He has placed in us. Do you ever get angry with your bees kind reader? do you ever get "blue," low spirited, and despondent? do you ever grumble at the weather? do you ever get cross to father and mother, brother or sister, because things in the Apiary don't go right? And ye fathers and mothers, do you ever throw a cloud over those juvenile faces because some selfish project of your own goes awry? It is very likely that you of yourself alone will never succeed, in trying to preserve serenity, peace and contentment, under all these trials, but an earnest appeal to that Great Author of the Universe, made in perfect sincerity, and submissiveness, will assuredly be answered, and it will be all made easy. I do not know to whom I am talking, only that it is to some fellow being whom I would gladly take by the hand, and assist in any way toward making his life better and happier, out of gratitude to that One, who has lately given me a new life.

A. I. Root.

A. B. J., and *Magazine* were on hand in good time, but *World* not until the 26th; *Magazine* for April is on our table now,

MEDLEY is under way, but will require some days yet before they are ready to mail. Remember patience is a—we forget the rest.

BARNUM & PEYTON, Edgefield Junction, Tenn., offer Langstroth frames of worker comb at 40c. each, drone comb, at 30c; less by the quantity.

EVEN if we don't always say so, we feel grateful to those who send us local papers containing articles on Bee-Culture. One from the pen of D. Lyons Browne, in the *Indiana Farmer* of March 20th, richly deserves being widely copied.

To get 1000 honey labels for 3.00 you must positively order 1000 without any change of type and the same of the 250 and 500 rates. For instance, 1000 ordered to be printed from four different sources of honey (250 each kind, 1.75 each) will cost 7.00 instead of 3.00.

In view of new postal rates we recommend that 10c. extra be remitted when \$1.00 queens are to be sent by

mail. Owing to press of other duties we shall probably not be able to rear queens this season. Will those whose names appear, in the 1,00 list, please mention whether or not they use an imported mother, that we may mark them as such.

WE take pleasure in calling attention to "Money in the Apiary" which we advertise again with the understanding that Mr. Burch will return the money to any one that may be dissatisfied with the pamphlet. We also cheerfully make the same proposition in regard to GLEANINGS. At the expiration of the year if you feel that you have not had a full equivalent for your money, write us as much, and we will cheerfully return the 75c. We hereby withdraw our criticism, for according to Mr. B's proposition you can all have the privilege of examining the book before purchasing—just as you would in fact if you saw it at your book stores, so there will be no necessity for us to argue in regard to its merits or demerits. Mr. B. names the following quite reasonable conditions that you are to observe.

Every one of your readers shall name GLEANINGS in connection with the order for "Money in the Apiary."

2nd If dissatisfied with it, they must return it unopened within one week from date of its receipt, together with reasons of dissatisfaction, enclosing a three cent stamp for postage on return of money.

Another change has been made in the Postal law, requiring 16c. per lb, instead of 08. Our prices on many articles have been so close as to render a complete new price-list necessary which we enclose in this No., and we shall have to insist that you throw the old ones away and order from the new one entirely. On all the honey labels especially, we are obliged to require 25c. per thousand additional, *when they are to be sent by mail*. Please bear this in mind in order to prevent delays and troublesome correspondence. We will be responsible for all changes we make in prices, but we cannot be for those made by the Government in regard to postage.

WE have procured from Mr. Fred. Weiss a box of his comb foundations and find them beautifully accurate, and perfectly flat. At about the same time we received a sample feeder from our friend Van Deusen, which by the way for ingenuity and simplicity, is enough to make any Yankee smile audibly. Well although the nights were frosty, we determined on making a practical test of both, before going to press, and accordingly fitted a sheet of the wax foundation into a frame, placed it in the center of the cluster of a strong colony, placed the novel feeder, full of syrup over the frame, and then packed clothing over the whole, so as to nearly fill the upper story. After forty-eight hours, we found the feeder empty and beautiful cells raised nearly full length from the wax sheet. Mr. W. uses enough wax in the sheet to nearly if not quite, make the entire comb. The advantage is, that we get perfect, strait, *worker* comb, perhaps more accurate than bees themselves ever build.

The disadvantages are, that it is quite a task to fasten the sheets in nicely, and they cost about as much as ordinary combs can be bought for, frames and all.

Mr. W.'s feeder, we think simplest of all *atmospheric* feeders.

"DID-YOU-EVER!" Novice had said for perhaps the twentieth time as he and Mrs. N., and Blue Eyes, were watching the bees in the forcing house, which has had the south side removed, as we have explained, so that the bees from the whole apiary had free access to a barrel of rye and oat meal, that had been spread out in shallow boxes. In the first place we have more bees than ever before, and they were trained to go out and in readily, by letting them work on combs of honey until they began to get somewhat

quarrelsome, then the combs were removed, and the meal piled up in tempting heaps in the sun, but perfectly protected from every breath of wind by the glass. They fairly roll and tumble in it in their joy, and their roar of happy industry sounds like an immense water fall. "Just see the crazy little fellows," says Mrs. N., as she holds up a handful of meal, which is instantly surrounded by the eager buzzing and fanning multitude, and as she becomes interested in studying the wonderful skill with which they moisten the meal with their tongues and then pack it in their queer little pockets, she forgets that bees ever do sting, and where is the wonder; there is certainly nothing about the insects that hover about our heads and ears now, that would suggest malice toward any living thing.

At this juncture Novice suddenly remembers that it is the 30th day of March, the paper is not yet mailed, accordingly his first move is to give Blue Eye's head a huge bump against the top of the low door way, and just now her mouth is puckering, in the attempt to keep back the tears that will well up in spite of his apologies, and exhortations to be a "brave girl." The bees buzz against the glass to some extent, but we trust will not when they become more accustomed to it. Wheat flour they use to some extent, but as we mentioned last year, nothing seems to please them so well as the rye and oats.

Evening.—But you ought to just take a peep with us into our hives. Brood is started like June, and solid patches of cells are seen, filled with the meal pollen. Only 53 colonies now; 11 lost in the "glass" experiment, 2 starved, 1 got dysentery and "friz," and one sold.

SUNDRY MATTERS.

The second semi-annual session of the Michigan Bee-keeper's Association, will be held in Kalamazoo, Mich., May 6th, 1875.

HERBERT A. BURCH, Sec'y, South Haven, Mich.

Keyes & Finn write as follows: Enclosed find \$1.00 to continue our advertisement in April No., as we wish to know whether our hive will stand the fire of criticism or not. If it is a humbug, the sooner it is found out, the better for all parties. It has carried us safely through two winters, and all is safe this winter, thus far (March 3d) with our 65 stands.

I received an imported queen from Mr. Dadant, that lived two years and was one of the most prolific queens I have ever had. She was then killed by accident. I have received queens from Chas. Dadant at three different times and they have always been satisfactory, not as tame as some bees I have seen, but excellent workers and very quiet on the combs. You may think me an especial friend of Mr. D., but I do not know the man personally and he does not know that I am over pleased with the queens I have received of him. I have an imported queen at present, of a dark leather color, from which I expect much. Her workers are well marked, broad band, but not as light as many like. Your friend, a lover of the bees.

A. T. Williams, Deer plain, Calhoun Co., Ills.

Reports Encouraging.

I BEGAN the season of 1874 with five stocks, increased to fourteen, from which I have sold 300 pounds of box honey, at an average of 22 cents per pound.

W. S. WARE, Fuller's Station, N. Y., Mar. 3d, 1875.

I commenced in the spring with 18 stocks, wintered out doos in Quinby hive; bees in just ordinary condition. Commenced feeding, to stimulate breeding, about the middle of April, and also took out all the combs not occupied. In doing this, I did away with a good deal of unnecessary room to be kept warm. I found that by this treatment they increased much faster than ever before.

Increased my stock to 29 by dividing. Bulk of box honey was secured from the middle of June to the last of July. The 10th of August I took the last of my boxes off and extracted all the honey from brood combs. Hives were well filled for winter from fall flowers. I am wintering 34 stocks; have increased 5 by purchase.

Whole amount of box Honey.....	1,111 lbs.
" " " extracted honey.....	712 "

Total.....1,823 "

I consider the above a fair yield, as they received but little attention after spring opened. besides I use

the great heavy, bungling, complicated, Quinby frame and hive. We like that kind of bungling hive here in York State, in spite of what was said at the N. A. Bee Keeper's Convention. "By their fruits ye shall know them."

A. H. ROOT, Palmyra, N. Y., March 8th, 1875.

Will bee-keeping pay in Northern Indiana? A report of 36 stands of bees kept by the writer 1 1/4 miles south of the town of Akron, Fulton Co., Indiana.

36 Stands, valued @ \$5.00 each.....	\$180.00
43 Bee Hives @ \$3.00 each.....	129.00
Estimate of time.....	25.00

Total.....\$334.00
\$334.00 forms the principal invested in money and work; now for the interest on the same.

Box Honey 848 lbs. @ 25c. per lb.....	\$212.00
Extracted 327 lbs. @ 16c. per lb.....	52.32
Increase, 7 stands @ \$5.00 each.....	35.00
Bees Wax, 31 lbs. @ 25c. per lb.....	7.75

Total Interest.....\$264.00
\$264.00 is the interest which is a fraction over 60 per cent clear of all expenses. I have 8 stands of pure Italians, and a number of hybrids. I had my Queens shipped from Wisconsin, Massachusetts, and Medina Co., Ohio. I use a modified Langstroth hive, with 8 frames, dimensions of hive inside 12x16 and 12 1/2 inches deep. I work at the carpenters' trade in summer and my wife and children attend to the bees and farm of 80 acres. ABRAHAM PONTIUS, Akron, Fulton Co., Ill.

OUR MEDLEY.

THE following came to hand after the Supplement was printed.

EDMUND ESTEY, Cardiff, Onon. Co., N. Y., sends us the following printed in large capitals.

I have a notion to see my nose in with the rest, so I will send along a picture. I don't know where you will place me, but put me where you please so I am with the bee men. You will see by the marks I make that I have never been able to blow my horn, although I think I can do as much with bees, as any with the same experience. I have kept bees since 1840. Got hold of my first Bee Journal three years ago, couldn't read, just barely knew my letters. My mother died when I was small, and I had to come up on foot, alone, across lots and with a hand-sled loaded; so there was little room for education. I got my learning from Langstroth Quinby and King; I have taken three Bee Journals for the last three years and can now read them myself. I have a hive of my own getting up, frames 12x12 inside. Use division board—one frame or twelve—use same hive for raising queens. I have made nine swarms from one, in one year. As Bee-keepers are all friends to each other here, I hope we shall meet at the great Bee-keepers' Convention where we shall part no more.

GEO. F. FOOTE, M. D., Stamford, Conn., sends the following kind invitation. For this and many others of the same kind, we can only return thanks and assure you that the kindness is fully appreciated, but that if we take good care of our bees, and GLEANINGS too, our visits will have to be limited to those of only a few hours, among near neighbors.

Should you and Mrs. Novice come east the coming season, Mrs. Foote and five nearly grown up "Feet" will be most happy to have you with that juvenile of course, as guests. We can feast you, swim you, fish you, drive you, boat you and show you our apary which though yet small, you will find *secundum artem*. Inclosed find my "phiz", taken some six or eight years ago. I am better looking now. I would like to see you.

A man who can't get a dollar's worth out of the "Windmill Print" can't read, and should have his perception brightened by a pair of leather spectacles.

Geo. F. Foote M. D. Stamford, Conn.

A. I. ROOT, Dear Sir;—Just behold!

J. W. D. CAMP, Camden, Ohio, the student in Bee-Culture, and tell me if I look like I could learn to succeed.

We see nothing to hinder, friend C., but then you know "we cannot always tell how far a frog can jump, by his looks."

M. H. TWEED, Pittsburg, Pa. Page 124, Vol. 2.

Dumbbuds and Swindles Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

H C. HAZARD & CO., whose circular we mentioned last month, send us a marked copy of the *Grocery and Provision Review*, calling our attention to the fact, that they ask *twelve dollars* per doz. for their California honey in quart jars, which would look as if it might be pure, but are we to understand that is all the *pure* honey they deal in? Right over the leaf we see the same quotations of Extracted honey at \$4.50 as mentioned last month. If they know this latter to be something else than honey, are they not swindlers, in this respect at least? Yet on another page of above Monthly is the following notice with a blue pencil mark around it.

The House of Messrs. E. C. Hazard & Co. is known to sell only the very best quality of goods that can be obtained, and if goods fail to come up to the sample shown to its buyer, the firm justly refuse to purchase the article, being too sensitive to anything that will reflect upon the character of its trade.

Now if such is the case, we demand an honest statement of what the article *is* that they are offering at \$4.50 per doz. qts., and advertising as *pure choice* honey. The same goods are being advertised quite extensively by other firms in N. Y., and unless they label it *just what it is*, we propose giving a list of all their names.

Circulars of a number of patent hives that are clearly frauds, are sent us but we hardly think it worth while to enumerate them, at present, but you can set it down that any circular claiming that "all prominent bee-keepers" recommend this or that hive "above all others," is a swindle.

Attempts are frequently made to bring in Quinby's name and others, and in one we see a testimonial from *M. Quinby*.

All receipts for making pure honey that cannot be told from that made by the bees, etc., are swindles *every time*. We clip the following from a circular by N. H. White, 441 Broad St., Newark, N. J.

Disappointment of bee-raisers is proverbial. It is said to be as difficult to manage a few hives of bees as it is to take proper charge of a cotton-mill. Hence the great scarcity of HONEY, and hence the *great value* of our recipe for making the beautiful CRYSTAL HONEY, which we are herein drawing your special attention to.

Our already stated elaborate researches have abrogated the necessity of bee process in the preparation of this necessary and delicious *life-preserver*. This recipe, therefore, is the sublime mode of producing honey in *every respect as good as that made by bees* without any of the risks or other disadvantages consequent upon depending on the hive method alone for the needful supply.

Ogdensburg, Wis. Feb'y 22d, 1873.
N. H. WHITE, Dear Sir:—Your Honey receipt is at hand, I have tested it and found it to be as good as recommended. It sells very well here at fair prices and is preferred by many to the genuine Bee Honey.

M. C. QUINBY.

How talented, frank, and how cheerful. "Cotton Mills" forsooth. Bees—abrogated.

Like "Flick" of the "Ambrosial," he uses "Slippery Elm" (to make the honey) and he

likewise charges \$2.00 for the *Stupid-endous* receipt.

It pains us to receive more and more complaints of Adair. Is it not possible that some friend of his can induce him to pay up these small items and to be a man once more. After all his pleasant writings in our Journals, it seems hard to think of him as a swindler.

HONEY COLUMN.

I have about 300 lbs. comb honey in Langstroth frames, taken out in Nov., good for table use, or good for feeding; price 35c per lb.—combs good. Also 300 lbs. Basswood extracted honey, price 15c; 700 lbs. clover, price 18c. per lb.

T. Pierson, Ghent, Summit Co., O. March 28, '75.

C. R. Isham, Peoria, Wyoming Co., N. Y., sends us an exceedingly neat and pretty honey box, and we have also on our table a sample of Barker & Dicer's, Sectional honey boxes, put together like the Crandall building blocks; both are neat and would probably enable the dealer to retail the honey at high prices on account of their attractiveness, (see advertisement of the latter) yet we cannot help feeling that paying for these fancy boxes by the *pound* is a great tax on the consumer. It may be said that is none of our business, that if people *will* persist in paying 50c. per lb. or *more*, for honey because it "looks nice," it is their own business, and not ours, even if the fancy box for which they have paid so much, is of no use to them at all after the honey is used out of it. In discussing the merits of the two systems of surplus with Adam Grimm, some time ago, he replied in answer to our remark about the expense of boxes for a ton of honey, that they *cost him nothing*; in fact he sold them at a *good profit*, as he received the same price per lb. for them as he did for the honey.

Of late years, is it not a fact, that people are being driven to purchasing only the necessities of life, and will they not soon, begin to see, that what is wanted, is only *good honey*, and not useless packages? As the consumers are really fellow beings also, shall we not encourage them in wholesome economy? In our own town, people have changed so much of late, that many, now say they would prefer a 3 lb. fruit jar of good extracted honey to one containing comb, even at the same price, and in regard to the fruit jar, every customer now prefers them because they are useful in every household.

Now our friend Pierson mentioned above, says he can get *nice comb honey* built in Langstroth frames in the upper story, while he is steadily using the extractor on the combs of the lower story, and we presume you will all agree with him when he says that he gets more honey in the frames than he could in any kind of boxes. The point is, just cut the comb honey out of these frames, pack it tastefully in the fruit jars, and pour in nice ext'd honey, heated as hot as it can be without melting the combs, seal it up instantly, and you are at no bother and expense for boxes etc., that are of no use either to you, or your *neighbor* the consumer, and you have a clean nice package that is good for years. Of course you will always furnish the liquid honey without the comb to those who prefer it. We sell a 3 lb. Mason jar with the comb, for \$1.00, without for 75c.

Heads of Grain, FROM DIFFERENT FIELDS.

MESSRS. A. I. ROOT & CO.:—I have lost no bees for two years. Winter them on summer stands, in Apiary which is enclosed on all sides with fence six feet high, the boards placed close together to modify the air within by keeping out the cold winds. This fence is certainly a great protection from the cold. The place thus fenced is about 100 feet square which for convenience we denominate "The Apiary." There is plenty of room in it for 100 colonies (or more) of bees. Have set out dwarf pear trees, grape vines, besides several varieties of choice or select small fruits, for shade and comfort, to say nothing of the rich fruit prospect a few years hence.

Have 20 colonies of bees, 2 Italian, the others natives, all strong in bees and honey. My bees made me about 60 lbs. nice box honey as a surplus per colony last year, would have obtained more if I had furnished boxes at all times in time for their wants. I am satisfied of this, that there is nothing more important in successful bee culture, than to have plenty of good hives, frames and boxes on hand during the entire working season with bees.

My bees are all in the Langstroth hives of the Simplicity persuasion. I have a circular saw for making hives, frames, boxes, etc., it is driven by horse power, cost me about \$50.00, besides my work in fixing up. It is just the thing for the hive business. You can see friend Novice that I have attempted to carry out your valuable suggestions in GLEANINGS, for which you have my thanks and kind wishes.

Heavens benedictions, and blessings upon you and yours and your readers of GLEANINGS in Bee Culture.
C. LARKINS, Braggville, Lyon Co., Ky.

We should prefer a fence 8 feet high if possible, but it must be very securely supported, or the wind will tip it at an ungainly angle. Put the boards close together, and then cover the cracks with lath. If the fence has been already made 6 feet, a board or two may be put along the top, leaving the lath battens to reach up across them in a way to give an appearance on the front of fancy paneling, without much expense or skill being needed. If you doubt the advantage of keeping off the cold winds, compare the difference in temperature some day in the spring between a spot protected by hills or buildings on all sides but the south, and one not so protected.

Which would you prefer, to purchase, bees in the spring in box hives at \$5.00 each, or furnish hives and have first prime swarms at \$4.00 each? Bees are wintering very poorly in this locality. They come out of their hives, when the thermometer is 10° below zero, the hives are frame hives and have the honey boards removed and in place is a piece of factory cloth, and the caps filled with straw so the inside of the hive is dry and all right, but what makes the bees come out at such times as they do I cannot say. The entrances of the hives are all shaded, so the sun does not call them out, but this makes no difference, they are bound to come out in cold cloudy days, as much as in sunshine. D. W. FLETCHER, Lansingville, N. Y. Feb. 22.

Take the whole colony at \$5.00 of course, for you will get the new swarm all the same, and have your old one left, at an expense of only \$1.00. We think your bees have the prevailing malady, and perhaps there is nothing that can be done more than what you have. You might try giving them a fly as directed on page 32, March No.

I looked over my bees yesterday, put them all in clean hives and found them all in good condition. Some very strong, none very weak, two had lost their Queens. Brood was in almost every one.

CHAS. F. MUTH, Cincinnati, O. Feb. 23rd, 1875.

The following is in regard to an improvement on E. J. Worst's plan for guide combs given on page 12, Vol. 2.

My plan of getting strait combs is the same as E. J. Worst's, only I make that straight edge just wide

enough to reach over where the guide is to be, with another piece tacked on so it won't slip over too far, making a gauge of it that won't go any place but the right one. Keep the strait edge in the left hand, and spoon and sponge in right hand—need not lay either down. I can guide four set to one, this way, it is just the thing. I am pleased to hear that Mr. W. has given it to you to publish; I freely give all my plans to our brother bee-keepers.
D. H. OGDEN.

Wooster, Wayne Co., O. Feb. 24th, 1875.

For the section honey boxes, these wax guides will be much preferable to wood, as they will not interfere with cutting the combs out close to the frames. Thanks friend O.

I am wintering my 73 stocks on their summer stands. Yesterday I found every colony all right, and placed rye meal out in the morning; at 12 o'clock each colony was very busy carrying in large loads of meal. Last season my bees yielded me in honey and increase a profit of 200 per cent.
WILL. WILSON.

Bardstown, Ky. Feb. 25th, 1875.

Bees have come through all right I think, despite the cold weather. A. J. COOK, Lansing, Mich. Feb. 26.

I have two stands now that I do not understand. Out of one (two years old), there are drippings of pure honey in quantity sufficient to issue from the hive and run off the board at 8 inches distance. From the other (last summer's swarm) something like thin honey or sweetened water has recently commenced to drip in quantity sufficient to run along the board on which they stand for 18 or 24 inches, I can see nothing wrong with either comb, or bees in either hive.

REV. J. H. BUCHANAN, Huntsville, O. Dec. 24, '74.

We think the trouble is insufficient ventilation, and that the straw mats would prove an effectual remedy. In one of our own stocks that has been out during our recent severe weather, we find honey on the bottom board, but the quilt was badly covered with propolis. The freezing and thawing of sealed combs outside the cluster will sometimes start the honey dripping, but the thin honey or sweetened water, is almost a sure indication of gathering dampness from the breath of the bees.

I commenced the season with 15 hives and increased them to 25. I run 12 of my best for the extractor and made 1300 lbs. of honey, some of my hives gave over 200 lbs. per hive. The remaining hives I made build comb for top frames and new swarms. My top frames are only 6 inches deep and I use 9 frames on each hive. I use the Peabody extractor, but it is a heavy running machine. I use the Langstroth hive and my frames are 19 inches long and when I put them in the extractor and turn them fast, the honey flies out the top of the extractor. Will your extractor hold my length of frames without throwing the honey out of the top of the can?

WM. BENCE, Newburg, Ky. Feb. 14th, '75.

We certainly do not intend to send our friends extractors that will throw the honey out at the top of the can. If the combs hang two inches below the top of the can we think it will never happen. There is one queer feature about this; we have made them for several seasons, to hang only about ½ inch below the top, and never had any complaint until we commenced making the low machines for the Gallup, American, and Standard hives, and finally to make the revolving frames lighter, we cut a circle out of the inside, supposing of course this would make no difference. Finally by actual test we saw that the machine would sometimes draw in the air near the central shaft, and send it out over the top of the can, carrying with it a fine spray of honey. We remedied the difficulty at once and before we had sent out many. Still if any one has a machine that we have sent them thus, we will cheerfully pay all expense needed to make them good. Any tin-smith can lower the revolving frame, or put a narrow rim around the top.

I wintered 20 colonies of bees on their summer stands, sheltered on the north side and covered on the top with quilts; they are all in good condition, no signs of dysentery. I think bees are not subject to dysentery when wintered on their summer stands. I think your plan of quilts on top an excellent one.

A. N. HESS, Tarrytown, Md.

We should be very glad indeed to learn that out-door wintering was even as safe as the other, but alas for stubborn facts.

Bees around here are wintering extremely well.

ADAM GRIMM, Jefferson, Wis. March 12th. '75.

Right glad are we to hear it friend Grimm. Do you know our next hobby will probably be having plenty of bees, plenty of sealed stores, and *let 'em alone* from the 1st of Nov., until the middle or last of March. Under the conditions mentioned, we are not sure but they would winter *out doors* safely during a long cold winter like this last. All of our experiments so far have only demonstrated that "tinkering" bees in cold weather not only does no real good, but often the reverse.

Standard hive arrived all right. Think it very fine, but not being acquainted with movable comb hives would like to ask a few questions. How do you prevent bees from going up above frames and attaching comb to top of hive? What is a quilt used for?

Friend B. do you know that you have perpetrated a "big joke?" At least it looks so to those of us who have for years been familiar with quilts, and we presume some of us would like to indulge in a huge smile but we want you all to keep your faces straight (for Mr. B. is a new member of our family) while we explain that the quilt is expressly to keep the bees from getting up into the cover. Spread it on evenly, and tuck down the edges so carefully that no bee is ever permitted to get above it. If they do, they will cement the cover down so that you can never get it to work without sticking afterward. The quilt is made soft, so as not to hurt them.

Don't you think hives need a ventilator?

No more than what the quilt, and the joint around the cover allow. On the contrary we think ventilators often do a great amount of mischief. In very hot weather, if the bees seem disposed to cluster on the outside, shade the hive, and give them room to go to work inside. If you cannot make a cluster of bees go to work somewhere, when honey is to be gathered, we shall have to call you a poor bee-keeper.

Are not the bees apt to put bee bread and brood in all the frames? J. D. BENJAMIN, Brightseat, Md.

Not usually unless the frames are purposely spread so as to secure this, which is just exactly what *we* should want them to do, for the Standard hive was arranged exclusively for the extractor, without any thought of box honey. However, you can put a second story on top and put boxes above as on other hives, or you can put about ten of the combs containing the brood in the middle and arrange boxes on both sides of these. In the latter case it may be advisable to make the entrance in the middle of the back side of the hive. If you have an idea that they will work in boxes better at the *ends* of the frames, simply turn the 10 brood combs lengthwise of the hive; hanging them on thin strips laid across from one rabbit to the other.

Don't you think carbonic acid gas is playing hob in our bee rooms? We made a passage way for it to escape through the bottom under the wall into a ditch but instead of passing out the air is coming in so strong that I think the carbonic acid stays in the room

and perhaps mixes to some extent with the warm air in the room. Our bees are dying more than I think they ought to—no signs of dysentery whatever—bees dry and lively. We have swept out about one and a half bushels of dead bees from 113 colonies. We feel that that is too much loss. P. W. McFATRIDGE & SON, Carthage, Ind. March 1st, 1875.

We do not think the above average, (a little more than $\frac{1}{2}$ pint dead bees to the hive), bad at all. Our own have died fully as badly and yet we think they have wintered well. We think carbonic acid has nothing to do with it; it is almost impossible for it to collect in any ordinary room and rarely in cellars, if there is movement of the air in the apartment. In wells or pits, where the area is small, and nothing to make a current of air, it may in time fill up like water, but even then it is easily stirred up with the air, by burning a wisp of straw or even dashing in a bucket or two of water. If it troubled the bees, those nearest the floor would die most, but we have never yet found such to be the case. Your ditch works backward because the warm air inside rises, and escapes through the ventilators and crevices, as it always must when the interior is warmer than the outside, (see page 1, Jan. No.)

Enclosed find my photograph which if you see fit to place in your *Medley* please put on the Quinby side of the picture. Not that I love Caesar less but Rome more. I am glad to see that you are letting up a little on the Quinby hive and box honey, but for that matter the Q. hive is better adapted to the use of the extractor than any other hive of which I have any knowledge, not even excepting the simplified dollar hive with "tin ears."

There has been much writing from time to time in GLEANINGS, on the subject of pollen and pollen producing plants. If I recollect aright, the *Wistaria* has never been mentioned as one of them. Having had a vine growing within a short distance of my *Apiary* for the last three years I have had an opportunity of watching the bees at work on it. The first time I saw them I thought a swarm had settled on the vine. I believe it to be one of the best pollen producing plants in the country. The Chinese (*Sinensis*) is the best of the *Wistaria* family. It grows to an enormous size and will attain under good culture 15 to 20 feet. I quote from Balfour's manual of Botany, (London, 1851).

"The *Wistaria* produces bunches of lilac colored flowers of great beauty and numbers. On one vine there have been estimated in one season, 9000 bunches, 675,000 single flowers, 3,375,000 stamens, and 4,050,000 ovaries, and for the purpose of fertilizing these ovaries, the anthers, if perfect, would have contained 2700 millions of pollen grains, or about 7000 to each ovule."

Aside from the benefit to the bees, *Wistaria* is one of the most elegant of all climbing vines and its rapid growth and profuse clusters of gorgeous purple flowers commend it to all who wish to make their homes beautiful by surrounding them with nature's choicest gifts.

JOHN C. McELRATH, Asbury, N. J.

My bees were left on their summer stands in a shed facing the south, with straw packed in between and behind them; movable frame hives with honey-board on, holes in honey-board open, rags or coils placed in top box on honey-board, small ventilation at bottom, and those bees were diseased before January, yet it had not been very cold. And now five of the ten are dead, died of dysentery. They had a large quantity of honey early in the fall, and left from 20 to 40 lbs. when dead. Did the great amount of honey injure them by preventing breeding in the fall? Was the ventilation right? There are men in this vicinity who have kept bees 20 years who claim upward ventilation is wrong, while others equally as well experienced favor it. Did I keep them too warm in the forepart of winter, thereby causing them to eat too much honey? My bees are losing badly on the snow now. Is it best to shade them from the sun at all times when they cannot fly safely?

I am willing to pay any one liberally for information that will enable me to winter my bees safely on their summer stands.

E. C. WHITE, Euclid, Cuyahoga Co., O.

March 22d, 1875.

The large amount of honey in the combs in

the fall, very likely *did* prevent brood rearing, and thus left you hives weak in bees. Your ventilation was all right. We think it well demonstrated that some upward ventilation is needed, especially where bees are left out in the cold. Although much is said about shading the hives, and fastening the bees in at such times, we have serious doubts whether *healthy* bees fly out thus when they cannot return; and if they are diseased, we have little faith in trying to keep them from dying. Our bees do not go out on the snow this spring at all, and we are much inclined to think they never will when fed on sugar syrup, a little every day through the months of Aug. and Sept., that they may rear plenty of brood, and seal up their winter stores, *while the weather is yet warm*. If it would not look reckless, we don't know but that we should add, they may then be wintered either out-doors or in.

Bees out-doors, as far as I know, were eight-ninths dead before that storm and will be more when it is over. Lost one-fourth of my own in house from various causes, mostly failure to move over to honey, while it has never been as cold as freezing inside house. Why is it? J. J. WHITSON.

Valley Mills, Marion Co., Ind.

We do not know why they fail to move over, unless it is a sluggishness engendered by disease. We find no such trouble among our own, this spring, and we cannot help thinking if bees were fed *daily* on sugar syrup through Aug. and Sept., as were ours, until they had *clean, dry, sealed stores* there would at least be *less* of such troubles. Friend Dean suggests that the combs be all removed except those the bees can cover, and if these be well supplied with bees, they will be kept warm and clean, and the bees *cannot* stray away from their food. Had our bees all been fed as faithfully as the greater part were, and put in to the *bee house* instead of being "tinkered," we feel sure there would have been *no loss*, at least up to this date, March 20th.

Tell that correspondent of yours who doesn't like to have the bees gum up his quilts, to spread one thickness of strong muslin on first; and then, his quilts may be of old or tender cloth, and always clean. Furthermore, will not the gummed muslin laid on send down the straggling bees, so that heavy pieces (like best parts of old pants) may be laid on for quilts, and no bees be crushed?

MRS. A. L. GORD, Onarga, Ills.

Thanks Mrs. G., very likely you are right. Should we use only the single thickness, the bees would likely gnaw through, but with the quilt over it, they would be warm and all right. It is such a pleasure to have clean soft quilts to work with, that we have often thrown aside our gummed ones for new ones.

I want to know how the bees make a worker, a drone, a laying worker, and a Queen bee out of the same class of eggs.

NORTON CASE, East Toledo, O.

Many experiments have demonstrated, we think, that fertile workers are no different from other workers, or at least that almost any worker may lay drone eggs under favorable circumstances, at least they always make their appearance with us, when any colony has been a long time Queenless. This seems to be the case all the same, with bees that have been reared in hive where no Queen cells have been present. Any worker egg may be made to produce a Queen before the larva is more than 5 days old; it seems to us that *food* is the principal, if not the only thing that brings about

this change, if we except making the cell larger to accommodate the large insect with the large amount of concentrated food that she literally swims in, where she comes to full perfection. We can do no better at present than to reiterate, that the eggs that produce drones have never been fertilized, as have those that produce the Queens and workers.

I am wintering on summer stands, but some days find 15 or 20 dead bees at the entrance of a single hive, then again only 2 or 3. We hardly ever have cold spells, that prevent our bees from coming out longer than a week. I have one hive that is jam full of honey, and I have no empty comb to give them to cluster on. What will be the best for me to do for them?

T. B. PARKER, Goldsboro, N. C. Dec. 12nd, 1874.

We know of no remedy except extra empty combs or the extractor. Although much has been said about bees having *too much* honey for safe wintering, we cannot remember that we have ever seen such a case. In an experiment before mentioned, where we fed one colony a barrel of sugar in Oct., removing the combs to other stocks as fast as sealed up, they were in Nov., about as full of stores as a hive well could be, yet they consumed enough before very severe weather, to give them ample room to cluster, and they actually wintered the best of any colony we had. Bees may be retarded in raising brood in the fall, it is very true, but does a *good* colony of bees ever suffer in *winter* from having *too much* honey? We should say the bees found at the entrance, indicated an unhealthy state of affairs in some way.

I have an Italian swarm but the bees have all died but a small handful, the Queen is yet alive. Shall I buy a black colony and put her in?

Do you think the Italian bees will stand our cold winters as well as our black bees?

What will you furnish me pure Queens for to sell to my neighbors?

J. A. SAGER.

North Bristol, Trumbull Co., O.

We would buy a black colony and introduce the handful of bees Queen and all. It can be done readily by using a cage large enough to hold them. Put it against a comb of honey and they will help themselves.

We do think Italians, just as hardy, though there are times when it seems as if there was a difference. We are inclined to think that it is the tinkering with them in the fall and winter, that is the cause of the mischief; the blacks being let alone, are all right. There is considerable that we cannot explain in regard to this dwindling down business. When Queens are sold at \$1.00 there can't be any wholesale rates as we can see, and why should there be? Your neighbors can send direct to the producer as well as you, and it will save extra handling.

Can you tell me at what time the Poplar, or *Liriodendron Tulipifera* blossoms in this latitude?

R. J. COLBORN, Chicago, Ills.

May and June. Although we have the trees in our forests quite abundantly about here, we have never seen much of the honey to recognize it, at least nothing like basswood. It is called Whitewood, here, and formerly was the principal soft wood lumber for building purposes.

DEAR NOVICE:—Here we are in the sunny *South* this 7th day of March, with 15 inches of *snow* on the ground this morning, the deepest we have seen and the only snow in about 14 months.

M. PARSE, Pine Bluff, Ark.

My 19 stocks of bees all right so far—winter in cellar.

H. S. ELKINS, Kennedy.

March 15th, '75.

Chautauqua Co., N. Y.

I have had some experience similar to that of Atkinson in Jan. No. Last season I placed a caged Queen in a black Queenless stock; after 36 hours I went to release her—it was a cold wet misty day. I raised the honey board, separated the frames, took the wax stopper out of the case and held the mouth of the cage down to the frames; the Queen went out of the cage and down the combs but soon returned to the top of the frames and took flight. I bade her good by and closed the hive; in a week I went to introduce another Queen when to my surprise I found an Italian Queen in the stock and laying eggs. I had similar experience in living a natural swarm also.

ED. WELLINGTON, Kiverton, Iowa. Feb. 18th, '75.

HOW TO WORK THE LONG OR STANDARD HIVES.

I have had New Idea hives in use four seasons, the only objection I have to them is that the bees build too much drone comb. When the honey harvest is over I make new swarms with the extra frames and bees, and put in a division board.

J. WINFIELD, Hubbard, O. March 3rd, 1875.

By making an entrance in each end of the Standard hives it is quite an easy matter to make two colonies of one. The *modus operandi* would be something like this; after honey gathering is over put in the division board, rear an extra Queen, and at the approach of winter it will be an easy matter to have two good colonies. In the spring if both are strong, one should be lifted out and put into a new hive. Both can then be built up until they fill their hives, just in time for surplus honey, and then we are to keep down the swarming impulse by faithful use of the extractor, and so on with another season. We are to have *two* good colonies in every hive at the approach of winter, and should they get weak either or both of them in the spring, they can be united or rather kept in the same hive during the honey season. This plan will require less labor, especially during cool or unpleasant weather, than any system with which we are acquainted, for your hive at all times is in perfect rig, and contains all the machinery needed for all seasons. We nearly forgot to consider the objection mentioned of drone comb, but if we can do no better, we can get our combs made in weak colonies, *a la* friend Dean; remember a set of combs will last a life time.

Last spring I bought 2 swarms of bees or what we called 2 swarms, paying \$6.00 for one and \$1.00 for the other, I took from them 100 lbs. of honey, put 9 stocks in winter quarters—or perhaps I should have said, I increased them to 9 stocks. Their winter quarters is the center of a large straw stack—cut in a door-way 5 feet, then enlarged it to 8x10—7 feet high, they appear all right. Would you give them upward ventilation in their hives?

CHARLES McCORMICK.

Waverly, Iowa. Dec. 20th, 1874.

We think under such circumstances they should have slight upward ventilation, that is if you use honey boards. Quilts that are not covered too much with propolis would be all right. Please tell us friend M., how the straw stack bee house answers by this time.

On page 142 your correspondent asks for the best method of harvesting mustard seed, I would like to have that question answered. He also asks whether the black is better than the white. I should prefer the white. Two years ago I sowed a small piece, it did well and the bees worked on it well in the morning. Whether they get much honey from it I cannot tell but it is a splendid plant to sow for pollen. I think it could be cradled without trouble.

I. E. DANIELS, Lodi, O. Dec. 24th, 1874.

Do you think that a novice needs a smoker and veil too? How do you mite weak swarms with stronger ones?

H. QUALE. Feb. 24th, '75. [Address lost.]

We think a smoker should answer the purpose of a veil generally, but exceptional cases occur, such as robbing, or cases in which a

Queen must be hunted for some emergency etc., etc. We would recommend that bees should not be handled as a general thing, when a veil seems necessary yet we have seen robbing going on at times at such a rate that the air would be full of angry bees ready to sting; smoke in such a case is of but little avail, and one must then, if obliged to go among the hives, either wear a veil, or take stings as they come. The latter course requires the courage of a scarred veteran. For uniting colonies see page 121, Vol. 2. Unless the Queen to be saved, is caged as in introducing, there is always some danger of her being killed.

WHEN AND HOW TO ITALIANIZE MOST PROFITABLY.

Should not Italianizing be done early enough, so the colony would be all changed before winter? The Italians destroy the blacks after they become a majority and this leaves the colony too weak to keep sufficient animal heat during the winter and spring.

JAMES ELY, West Alexandria, Wash. Co., Pa.

Of course if you can Italianize a colony so early that the young Italians have a chance to participate in the honey harvest, it will be a great advantage. Those who do this however should not rely on dollar Queens, but should pay the price of a Queen in May or June. As we have said before, dollar Queens probably cannot be furnished so as to pay expenses before July. If you rear your own Queens, the question comes up as to how it can best be done. If you destroy the old Queen and give them a Queen cell in May or June, and thus deprive them of eggs for two or three weeks as mentioned in another column, there is great danger of thus damaging the colony for honey, for that season, more than the extra value of the Italians. With the Standard or a similar hive, we can make a nucleus in the back end and raise our new Queen, without stopping the old one from laying at all. When both are laying, and have got their combs well filled remove the old one, until then, and no time is lost. It is true there is some danger to the young Queen when they are united, but not much if honey is coming in, and the colony is watched for a day or two after. If the young Queen is attacked, she will be kept for some hours in a ball of bees before she is injured, this must be watched for. Throwing such a ball of bees into a glass of water is a very safe way to liberate the Queen. Don't be frightened if she appears dead after this cold bath, she will soon revive if put in a cage and warmed. Removing the old Queen, and giving them a young Queen just hatched, from a lamp nursery or otherwise, is a very economical way, and but little trouble, but even then we lose (see page 52) from 5 to 15 days, and we can much better afford this loss after the honey season than before it, more especially if our colonies are weak. We must think it an error about Italians killing off the blacks, we have never been able to discover that bees among themselves make any distinction in regard to race or color.

Please state how many revolutions per minute you run the honey extractor?

Wm. G. NORRIS, Honeye Falls, N. Y. Feb. 26, '75.

It is hard to tell accurately without testing actual work, by the watch, but as nearly as we can judge by turning an empty machine, for Langstroth combs, it requires about 75 per minute. In cool weather and with thick honey, of course greater velocity will be required.

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As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

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Supplement to APRIL No. 1875; and Eighth Edition Circular and Price List.

OUR MEDLEY.

THE BEE-KEEPERS OF OUR COUNTRY.

DEAR FELLOW BEE-KEEPERS:—It is now the 9th of March, and though winter still lingers, the sun has to-day thawed the ice off the walks sufficiently to allow Blue Eyes to take extensive promenades, of such a nature, that she fairly bubbled over at supper time with accounts to her papa of the wonderful things she had seen "out doors-es." The bees have rather stopped dying in the forcing house and are now starting brood very fairly, in proportion to their diminutive numbers, left to gather meal and care in other ways for the well being of their little ones. The rest of our Apiary seem to have wintered splendidly; GLEANINGS is receiving daily accessions to its circle of friends, although it has already a far larger number than at any time last year, and the world in general presents such an unwonted cheerful aspect that we really *cannot*, get at the matter in hand, until we tell you all how fervently we thank God for his many *many* blessings of which we are so little deserving. Prominent among them is the pleasant news coming from one after another of our old friends to let us know they are rejoicing to find that we *too* have *finally* "found that peace that passeth understanding."

Do you wonder that we rejoice to find we have so many ministers among our subscribers, that we feel as if we *MUST* take them all by the hand and wish them God speed in their noble work of reforming mankind? And this reminds us that we hope we shall have the approval of all of you in deciding to mention Mr. Langstroth, first of all the Bee-Keepers of America.

REV. L. L. LANGSTROTH, of Oxford, Butler Co., Ohio, most of you know, is generally accorded the honor of having first made the movable comb bee hive practically a success, and of having introduced it extensively among the people. How far he has been remembered, and what are his present circumstances may be gathered from the following extracts from a letter just received from him. It was not intended for publication, yet it answers so many

inquiries in regard to him that we feel sure he will excuse it.

Excuse dear friends, the delay in replying to your kind inquiries. Since the last of June 1873, I have been laid aside from business of all kinds, and only in a few instances have I been able personally to respond to letters addressed to me. This week for the first time, have I felt any very hopeful symptoms of restored mental activity. A year ago last fall I was compelled by poverty and sickness to part with all my bees, and it is only within a few days that I cared to hear again the hum of an insect in which I once took such delight. Two years ago I was straining every nerve to have the suit of Otis against King brought to an issue. That eminent counsellor S. S. Fisher, after seeing all that the defense could say for their case, was confident that the claims of my patent would not be invalidated. The day was set for the hearing; but before the cross examination on my own sworn statement could be completed I was prostrated in mind and body by my old complaint, and every thing came to a stand. Since then Col. Fisher has died; and Mr. Otis, after being some time an inmate of an insane asylum, died there, and of course the suit came to an end. My relatives knew, and Mr. H. A. King was also informed by me, personally, that in aiding Mr. Otis, I had ceased to expect any pecuniary benefit by appealing to law (in case of a favorable verdict) to maintain my own rights against infringers. My settled and declared intention, was in the large territory which I then owned, to leave all infringers to act as their own consciences might dictate, in paying me a license fee or not, even although the law allowed me seven years after the expiration of the patent, to collect damages against them. I have felt for years that from the many conflicting, and as I believe, infringing hives, which have come into use, my relations to the bee-keeping community, had become misunderstood by many who were ignorant of the facts. I have unceasingly grieved to find myself in my old age, in such unpleasant antagonism to many with whom I sought to maintain only friendly relations. I have never derived even a meagre support from my patent, independent of the employment, and am now, since I have been laid aside from all business, almost entirely dependent upon the kindness of relatives.

Should I regain sufficient health, I should delight to revise my work on the Honey Bee, and give it the benefit of the latest discoveries and improvements.

Just before I was taken sick, I had been planning to make you a visit and show you what I regarded as a decided advance in the way of constructing both hives and frames. I remember with great interest our very pleasant correspondence, and the expressions of kindness from Novice and family. I associate you with the dear wife who appreciated so deeply the interest which you and your kind physician took in my health. With the kindest regards to each member of your family, I remain as ever,

Very truly your friend, L. L. LANGSTROTH.
Oxford, O. Feb. 26th, 1875.

In giving the above we have several objects in view; one is to show those who are entertaining hopes of gain by selling rights, that even so valuable an improvement as the movable comb, only resulted in trouble and loss to almost all parties concerned. And worst of all, it made unkindness, and trouble, where all should have been friends and neighbors. Lastly, it shows those who feel as if they owe a debt that has not been paid, just how they can recompense our kind old friend for his services.

Money may be sent us, and we will give a printed receipt for it in GLEANINGS each month. If Mr. L's health permits, we shall also expect brief communications from him for GLEANINGS. Fellow Bee-Keepers can we not give our old benefactor a few bees to enable him to start anew? Who will give a colony? Those in box hives would be safest to ship and our friend would in all probability prefer to transfer them to his own hives. Come now, let us have a donation party, send in bees, Queens, empty comb etc., etc. As he will need some money to pay express charges on all those box hives you are going to send him, we will start the list with \$25.00 for that purpose. You can send money to him or to us as is convenient, but drop us a card telling us what and how much you have sent, that we may give proper credit. A fair view may be gathered of Mr. L's candor and good sense from his concluding remarks on page 28, Vol. 2.

M. QUINBY, St. Johnsville, Montgomery Co., N. Y., although also, well on in years, is still, we are happy to say, strong and vigorous both in mind and body. As something from the pen of a person will many times give the readers a more vivid idea of their peculiar characteristics than many pages of description, we shall on account of want of space be obliged to content ourselves with simply indicating where their writings may be found in GLEANINGS. Mr. Q's communications may be found on pages 102, and 104, Vol. 2, and 14, and 27, Vol. 3.

All who have read Quinby's and Langstroth's books, and we hope most of our readers have, we think will agree with us, that these works were evidently written with a true spirit of benevolence toward their fellow beings, aside from any feeling of pecuniary gain that might result thereby. Our warmest thanks are due them both for teaching us our A, B, C's in the science. Although these two pioneers struck out alone, and each without any knowledge of the other, we think it much to the credit of both that they agreed so nearly. The works that have since been compiled although deserving of merit for having condensed much of the matter, are yet so evidently dependent on these two, that we cannot think the writers deserving of a place by their side.

At present, we have three large honey producers in our Country who seem to deserve mention rather in advance of the rest.

J. S. HARRISON, of San Diego, California, the man who has shown himself capable of managing something like 2000 colonies, and who has produced from them in one season about 75 tons of honey, writes as follows in answer to a request for his Photo. Although his reply contains much sound sense and wisdom, we must think that we did not succeed in making him understand that our Medley is only a friendly grouping of those whose labors seem to give them a peculiar sympathy for each other. We are very sorry, but we suppose we shall have to content ourselves with his letter in lieu of the Photo.

Your favor came duly to hand, forwarded to my Mountain retreat. To give to the public at this early period, the results of my successful management in Bee culture, would not be consistent either with my self interest, having expended so much time and money in arriving at the results etc., nor justice to the several young men who are serving an apprenticeship

under me, and who are surely entitled to more consideration than the public who contribute nothing to develop the business. To train young men to my method is the only sure way to perpetuate the business and rescue it from the dishonor and odium that has been brought on it in years gone by, by speculators, as well as by some who claim a place as *Apiarists*. This country is different from any other and I find myself yet much at a loss to understand the seasons, as each varies from the preceding. One or two years of my personal attention will do much to reduce the business to shape and establish precedents for future reference. I have no photograph suitable to send you, besides my reputation as an Apiarian needs more years to establish before being introduced to extensive public notice. Accept my thanks for your consideration and suggestions as to GLEANINGS as a medium to answer inquiries etc. I will avail myself of your offer at an early day. J. S. HARRISON. San Diego, California. Feb. 11th, '75.

CAPT. J. E. HETHERINGTON, Cherry Valley, N. Y., seems to come next. See his report on page 7, Vol. 3. Now right here comes a point that we cannot illustrate better than by making a little extract from a private letter. Will our *young* readers especially bear in mind that it is almost out of the question, no matter how good natured they may feel, for such men as Harrison, Hetherington or Grimm, to answer all they receive. We cannot do it, even while we make it our especial business to answer inquiries. Many times the labor of answering an inquiry in full is as great as writing an article in full for an agricultural paper; in the former case, it is only used for advertisement, in the latter it may benefit thousands!

To make a report of this kind is a *small* matter, while to take the consequences is quite serious. With my present notoriety I receive more letters than I can find time to answer, to say nothing of *making* a Hotel of ones house. When a man says "he has come 300 miles to learn just how to manage to get so much box honey" one cannot do otherwise than treat him just as well as he knows how. J. E. H. Dec. 31st, 1874.

Just exactly friend H., we must be neighborly, even if it involve making every subscriber on our list wait for their paper, while we are giving our attention to a *single* one of them. Cannot we make our *Journal* a more perfect medium, for making, and answering inquiries?

ADAM GRIMM, Jefferson, Wis., is another illustration that even advanced age need be no serious impediment to successful bee culture; see his reports on page 86, Vol. 1, and 127, Vol. 2. Friend Grimm has for years contributed, much, both in his writings in *A. B. J.*, and by importations of superior stock of Italians.

As we have got through with the five principal characters, shall we not now arrange ourselves simply, in alphabetical order?

MISS A. ("P. G.") positively declines entrusting her biography to our voluble pen, in any shape or manner, so that we shall have to content ourselves with the valuable piece of information that Miss A., is P. G., and that P. G., is Miss A.

MR. & MRS. AXTELL, of Roseville, Warren Co., Ills. Page 21, 47, 82, 142, Vol. 2; 21, Vol. 3.

MARTIN H. ADAMS, Fort Ann, N. Y.

O. L. BALLARD, Malone, N. Y.

GEORGE BALL, Danbury, Conn., writes Feb. 11th, 1875:

Last spring I had 6 hives, made an extractor and sold over \$100.00 worth of honey. Increased artificially and have now *thirty-one* on summer stands.

MISS SARAH BARKER, St. Johns, Mich. A friend of hers writes:

I recently purchased a few colonies of Italian bees for her with money she earned giving music lessons. She has started with a year's subscription to GLEAN-

1863, and a copy of Langstroth's book, together with a good stock of patience and perseverance, hence I think she will succeed.

P. D. BASSFORD, Waterloo, Wis.

FRANK BENTON, Edgelfeld Junction, Tenn. P. 115, Vol. 2.

ROBERT BICKFORD, Seneca Falls, N. Y., is we believe, the original inventor of Quilts.

E. D. BILLINGS, Elmira, N. Y.

E. C. BLAKESLEE, Medina, O., is the man who has the Railroad Apiary; See page 3, Vol. 1, and 75, Vol. 2.

JAMES BOLIN, West Lodi, Seneca Co., O. P. 10, 47, 55, 65, 95, 101, 104, 105, 109, 115, Vol. 2, and 25, Vol. 3.

DR. F. BOND, West Salisbury, Vermont.

DR. J. P. H. BROWN, Augusta, Ga. P. 24, and cover to Sept. No., Vol. 2.

D. LYONS BROWNE, Indianapolis, Ind. P. 70, 93, Vol. 2.

HERBERT A. BURCH, South Haven, Mich., is well known as a writer in most of our Journals. P. 126, 144, Vol. 2; 14, Vol. 3.

J. BUTLER, Jackson, Mich. P. 9, Vol. 2.

M. H. CLEMENT, Belleville, Mich. P. 119, Vol. 2, and 10, Vol. 3.

ELI COBLE, Cornersville, Marshall Co., Tenn.

PROF. A. J. COOK, Lansing, Mich., has shown himself, by his writings and at Conventions, one of our clearest thinkers, and he don't go wild in his hobbies. P. 23, Vol. 3.

J. H. COOK, Paulding, Jasper Co., Miss.

FRANK J. COATS, Columbus, Ind.

Mr. C's wife sends this Photo without his knowledge wishing it as a surprise to him. She also says they commenced last spring with 4 colonies, and have increased them to 9, and taken 300 lbs. of clover honey which mostly sold for 30c. She, as well as some other bee-keeper's wives write us excellent letters and then say we must not print them. Are we not excusable if we are a little disobedient now and then?

J. CRANE, Bridgeport, Addison Co., Vt. P. 30, Vol. 1, and 70, Vol. 2.

C. P. DADANT, Hamilton, Hancock Co., Ills., and his father Chas. Dadant, bid fair to stand at the head of the Importing business. Some of Chas. Dadant's articles may be found on pages 29 and 50, Vol. 2.

J. L. DAVIS, Delhi, Ingham Co., Mich. P. 20, 23, 31, Vol. 1, and 9, 12, 51, 62, 107, 130, Vol. 2.

G. W. DEAN, River Styx, Medina Co., O., like many of the rest of our friends has made himself master of one particular point. Friend D's specialty is being able to make his bees build all worker combs, and build them *straight*. His bees in fact, obey orders in general much better than some we have seen. P. 91, 92, Vol. 2.

W. J. DEDERICK, Borodino, Onon. Co., N. Y.

G. M. DOOLITTLE & WIFE, Borodino Onondaga Co., N. Y. We have many very good reasons for feeling that Mr. D. has not only been a friend, indeed, but he has proved himself also a friend in need. P. 63, 82, 89, 95, 123, 132, 135, Vol. 2 and 20, Vol. 3.

J. DONAHOE, Newboro, Ontario, Canada.

I have kept bees the last 8 years, have at the present time 120 stocks, all in movable comb hives, and mostly Italians.

A. N. DRAPER, Upper Alton, Ills. P. 144, Vol. 2; 36, Vol. 3.

ANDREW DUNLAP, Champaign City, Ills.

P. H. ELWOOD, Starkville, Herkimer Co., N. Y. P. 55, Vol. 2; 7, Vol. 3.

JOHN ELLIOTT, Wadsworth, Medina Co., O.

B. FINCH, Gallupville, Schoharie Co., N. Y. P. 47 and 71, Vol. 2.

E. GALLUP, Orchard, Iowa.

"Gallup's" name has become almost a household word among bee-keepers, and we only regret that we do not hear from him of late as often as we once did. Open almost any where in the earlier volumes of the *A. B. J.*, and you may be sure of hearing either *from* or *of* him.

A. GREY, Reiley, Butler Co., O.

KATIE GRIMM, (now Mrs. H. Geiseler, of Green Bay, Wis.) will have to be considered the Heroine of the Extractor for some years to come we fear, as no other young Miss, (or Mrs. either for that matter) seems equal to the task she describes on page 53, of *A. B. J.*, for Sept., '71. Also see GLEANINGS page 7, Vol. 3.

MRS. LUCINDA HARRISON, Peoria, Ills. P. 116 Vol. 2. Mrs. H. deserves thanks for the lively articles she has furnished our Western papers.

H. HUDSON, Douglas, Mich. P. 140, Vol. 2.

E. W. HALE, Wirt C. H., Va. P. 117, Vol. 2.

DR. HAMLIN, Edgelfeld Junction, Tenn.

Dr. H. before his decease, was one of the most extensive Apiarists in the South, and labored long and diligently in disseminating the Italians. At the time of his death, we believe he counted his colonies by the hundred.

F. H. HARKINS. We have not his own Photo, but only that of his Apiary, when he was located at Home, Brown Co., Minn. See page 21, Vol. 2.

MRS. LEVI HOLLINGSWORTH, Monmouth, Ills.

E. HUNTER, Manchester, Mich. P. 94, Vol. 2.

DR. J. M. JANSO & WIFE, Los Angeles, Cal.

In accordance with your invitation in GLEANINGS, I send you my wife's and my own Photo, as we are both bee-keepers, although novices. We start with 100 stands of bees, out of which one was killed while moving them over a rocky road, the rest are all very large colonies, some blacks, some hybrids, and the rest Italians. We learned the theoretical part of Apiculture and now we start in practice. The bees work on pollen *now*. I have been practicing medicine in town, but my health failed and I gave it up, and put up a bee ranche at the foot of the Sierra Madre Mountains, about fifteen miles from town in a fine place. We have a fine home and start an extensive orchard and vineyard in addition to our bees. We, I mean wife and self, are great bee enthusiasts; stings don't scare us, and we are in anticipation of a lively season. At the foot of our house we have over 500 acres white sage and much other bee feed.

We extend to you and your wife a hearty welcome, Dr. J., and shall look forward with much pleasure to receiving frequent reports from your mountain home. May we suggest to Mrs. J. that although her task may at times be laborious and fatiguing, we hope she will not be wearied in well doing. Remember that a nation of sisters are debating whether they are fitted for such duties, by their husband's, father's or brother's sides, and even *one* who gets discouraged and gives up may exert a wide influence over the rest. Think of the great blessing of that robust health, that is only to be obtained by a life in the open air, among the hills flowers and trees, and remember what a great boon it will be to many, of your sex, if they once learn that they can thus be useful, and feel that their acquired skill and knowledge, places them, where they may not feel dependent on others, no matter what reverses may overtake them in life.

LEWIS KELLEY, Smyrnia, Ionia Co., Mich. P. 116, Vol. 2.

C. KENDIG, Naperville, Ills.

W. M. KELLOGG, Oneida, Knox Co., Ills. P. 141, Vol. 2.

D. N. KERN, Shimersville, Lehigh Co., Pa. P. 57, 60, 70, 72, and 84, Vol. 2; 9, and 23, Vol. 3.

Friend K. seems to be the original inventor, and for that matter the sole advocate at present, of cloth curtains for keeping the bees from the sun, and keeping off cold winds. The facility and quietness with which curtains can be moved, it seems to us places them before glass and shutters, that is if we really need to give the bees sunshine between the months of Nov. and March, a point on which we confess to be undecided.

E. KRETCHMER, Coburg, Montgomery Co., Ia.

As a matter of historical record, I may state, that I have owned Italian bees longer than any person in America. Being raised only 5 miles from the residence of Dzierzon, of Carlsmarkt, Silesia, I had the pleasure of seeing the first Italian bees ever brought to Germany in 1853. In the same year my father obtained a Queen from Dzierzon, and on the 14th of March, 1854, I received a swarm of *pure Italian bees* as a birth present. For my first Queen in America I paid \$50.00 gold, and in August 1861, [then in the U. S. Army] I sold my first colony of Italian bees for \$150.00; quite a difference from present prices.

We have decided to give the above a place, yet it seems to us unaccountable that Italians should have been sold at such figures the same year that the *A. B. J.* was started. We find them advertised at that time on its pages at prices not so very much in advance of the present ones for full colonies. Was it not Confederate money friend K.?

MR. & MRS. D. P. LANE, Koshkonong, Rock Co., Wis. P. 9, 51, 94, and 143, Vol. 2; 84, Vol. 3. C. T. LANE, Koshkonong, Rock Co., Wis.

P. LATTNER, Lattners, Dubuque Co., Iowa, writes:

In the spring of '74 I started with 24 colonies mostly weak, had plenty of empty combs [lost 110 colonies in the spring of 1873 with the dysentery] and took with extractor 3640 lbs. of honey. Sold all but about 150 lbs. at 20 to 25c. per lb. Increased to 49 and put 48 in winter quarters, for the first time, in a dry cellar. Examined them March 3rd, all right except one Queenless, brood in nearly all stages. My bees had not one inch of comb to build. Increased artificially, after the honey season was over. Enclosed find Photo for your Medley, if you think it won't "bust" it.

If the Medley won't stand a report from such a bee-keeper as you, friend L., it ought to be—Ahem. We fear our *veterans* are not equal to the task of 150 lbs. to the colony besides doubling the stock, even if they do have combs unlimited. Who can do better with 24 colonies?

E. LISTON, Virgil City, Cedar Co., Mo.

P. LIVINGSTON, New Salem, Alb. Co., N. Y.

J. F. LOVE, Cornersville, Tenn.

W. S. LUNT, Fostoria, Hancock Co., O. Page 22, Vol. 3.

T. G. McGAW, Monmouth, Warren Co., Ills. Pages 99, and 120, Vol. 2.

I now have 60 stocks, and 6 nuclei. I expect to winter and spring every one of these. I won't tell you now how much honey I expect to take from them. A. McMAINS, Chariton, Lucas Co., Iowa. P. 60, and 96, Vol. 2. From the cheerful tone of friend M's letters we would not think of his being *deaf*, yet the intense questioning look so common in such cases is clearly seen in the Photo. He writes:

I have not heard a word since I was about 15 years old and I am now near 34, but I can talk well. It will be a great pleasure to look upon the faces of the many whose interesting articles we have been reading so long.

REV. J. MEADOR, Dover, N. H.

Dr. C. C. MILLER, Chicago, Ills. Pages 9, 56, 57, and 140, Vol. 2, and 52, Vol. 3.

N. C. MITCHELL, Indianapolis, Cincinnati, Columbia, Tenn., and finally Defiance, O., when last heard from. Friend M. *teaches school* for the benefit of those benighted in the science of bee culture, and also for the purpose of getting \$30.00 for one lesson occupying less than two hours. He also keeps very valuable receipts for sale telling things that can never be found in any Journal. You pay him the money (from 5 to \$50.00) and then learn that he by mistake left the precious papers at home but that they will be sent first mail etc., etc. Our readers may be astonished to learn that *he does* get large sums in this way, and even from neighborhoods where GLEANINGS circulates at that. See pages 80, Vol. 1; 20, 32, and 128 Vol. 2; 22, Vol. 3. We earnestly pray that Mr. M. may be led to see the error of his ways, and become a useful member of our branch of industry. He is smart and talented and could easily make a handsome income by raising honey and bees *honestly*, instead of prowling about the country as he does.

G. C. MILLER, Mt. Hanley, Nova Scotia. Page 106, and 143, Vol. 2.

J. P. MOORE, Binghampton, N. Y. P. 118, 130, and 143, Vol. 2.

W. P. MOORE, M. D., Richland Station, Sumner Co., Tenn. Page 110, Vol. 2.

J. E. MOORE, Rochester, Beaver Co., Pa.

THEO. MOLTZ, West Fairview, Pa. Pages 80, 103, Vol. 2.

P. MOHLER, Oneida, Knox Co., Ills.

CHAS. F. MUTH, Cincinnati, O. Pages 10, 22, 33, 139, Vol. 2; 19, Vol. 3.

SAMUEL MUMMA, Highspire, Dauphin Co., Pa. Page 102, Vol. 2.

A. J. MURRAY, Memphis, Tenn., is widely known as a writer on Apiculture. He says:

From experience during the war, [I was a "Johnny Reb"] I found the bee-keepers ignorant. I was raised among bees in Europe, and loved them, and as soon as I had a home of my own, I began to study them again closely, and I have given my experience and advice for the past 5 years, through the columns of the *Southern Farmer*, *Southern Cultivator*, *Rural Alabamian*, *Our Home Journal*, and *Texas Farmer*, besides other papers that have lived and died some time ago. By this means I have awakened an interest in bee-keeping that was never known before, and the interest continues to increase.

JAMES MARKLE, New Salem, Alb. Co., N. Y.

J. H. MARTIN, ("Scientific") Hartford, N. Y. P. 116, Vol. 2. Scientific is pretty well known as a faithful and disinterested writer, in *A. B. J.* particularly.

S. D. McCLEAN, Cullcooka, Maury Co., Tenn.

By your rule of judging a bee-keeper by the tons of honey he sells, you won't know where to locate me, as I have never made a report of my success, but will try and be content with the position assigned me.

J. McELRATH, Asbury, N. J.

NATIVE AUSTRALIAN.

We should like very much to be able to state *positively* that this individual is a bee-keeper but to confess the truth the picture was only sent us by our subscriber in Australia, (page 124, Vol. 2), and he neither said he *was* or *was not* a bee-keeper, but we give him the benefit of the former supposition. It strikes us that bee veils, with extensive "coat tails" to 'em might be in brisk demand in a country where such simplicity (?) of dress is in vogue.

J. H. NELLS, Canajoharie, Montgomery Co., N. Y. Page 32, Vol. 3.

NOVICE AND BLUE EYES.

But what has Blue Eyes to do with Bee Culture, some may ask? Well, not much as yet, but as it so happened, that she first opened those blue orbs, to the light of this world, on the very day, that GLEANINGS Vol. 1, No. one, came from the printing office, she became associated, and grew with GLEANINGS, in the affections of her papa. Accordingly at a very early day, she visited the bees with him, and shared his pleasures and enthusiasm. Up to this date she has, strangely, never been stung. Should it please God to permit her to talk to you all on these pages, at some future time, as does her papa now, that day will indeed be a happy one to both her parents. Mrs. N., has been deterred from taking a very active part in the duties of the Apiary, principally by the very severe, and almost alarming effect of a single sting. She is promising now however, to make an attempt to become inured to the poison, a point on which, although her faith is very faint, Novice's, is unbounded.

H. NESBIT, Cynthiana, Ky. A valued friend who has been through the "ups and downs" of the business, but who we think is getting to be a pretty cool and steady hand of late.

MISS IDA F. NOYES, Detroit, Mich. A friend furnishes the following:

Several years ago she obtained a colony of bees in a box hive. I transferred it for her. The number of colonies was increased the first season to three or four; then came a severe winter and all of them died. This of course, was discouraging to a beginner, and, to say the least, her opinion of bee culture was at "low tide." She then changed her location for the purpose of attending high school, and the subject of bees was dropped for a time. Happening however to read a bee item of mine, her interest was re-awakened, and, though for a long time she kept very still on the subject, she says "I very soon became so interested in Apiculture that I read anything and everything I could find relating to the subject, and at last have come to the conclusion that bee-keeping is the very best kind of business to follow, and since it allows much leisure during the winter months, one can devote considerable attention to general literary culture."

She now has an interest in a modest little Apiary and is succeeding finely.

OUR FRIEND CHARLIE, is not a bee-keeper either, but he comes very near it, for he carries the frames, hives, extractors, honey etc., etc., to the station, and brings the tin, lumber, sugar etc., besides the paper, type and all the materials for printing the "Bee Cultivator" as he terms it. Charlie has *seen bees* a few times but he has never got hurt and we consider him almost one of us.

D. D. PALMER, Eliza, Mercer Co., Ills., has written some pleasant articles entitled "Chips etc." He is familiarly known through the Journals. He writes us March 1st.

Lost all my bees two years ago; last winter lost 60 out of 95, the 35 left I increased to 100 and got 3000 lbs. slung honey and 600 lbs. box honey, 3600 lbs. in all, bees are in cellar, no sign of disease.

GEO. PARRATT, Winamac, Pulaski Co., Ind. Page 9, Vol. 2.

MELVIN PARSE, Pine Bluff, Ark.

T. PIERSON, Ghent, Summit Co., O. Page 22 and 58, Vol. 2.

Wm. PAYNE, Spencer, Medina Co., O. Page 92, and 118, Vol. 2.

E. S. POPE, Indianapolis, Ind.

A. J. POPE, Indianapolis, Ind. P. 144, Vol. 2.

M. L. RAUB, Bolivar, Alley Co., N. Y.

Mrs. M. L. RAUB, Bolivar, Alley Co., N. Y.

J. T. ROSE, Petersburg, Monroe Co., Mich.

MR. & MRS. M. RICHARDSON, Port Colborne, Welland Co., Canada. Page 120, Vol. 2.

L. C. ROOT, Mohawk, Herkimer Co., N. Y. Page 27, Vol. 3.

S. ROWELL, Faribault, Rice Co., Minn. Page 9, and 105, Vol. 2.

Mrs. S. ROWELL, Faribault, Rice Co., Minn., is the woman that is going to get an Organ with the proceeds of a single hive, (page 13, Vol. 3), and she will get it too, or we are no judge of "wo-man nature."

CHAR. H. RUE, Manalapan, N. J. P. 108, Vol. 2.

W. H. SEDGWICK, Granville, O.

I don't feel as though I was one of you yet, until I can say I have had 100 lbs. surplus from a hive. I enclose a Photo of my "precious self;" Mrs. S. thinks that will be the best looking man in your collection.

Mrs. S. is quite right; we hope every woman, aye, and every man too, feels a preference for the fellow being whose happiness God has so intimately interwoven with their own.

E. A. SHELTON, Independence, Buchanan Co., Iowa. Pages 57, 96, and 131, Vol. 2.

Mrs. E. A. SHELTON, Independence, Buchanan Co., Iowa.

W. F. STANDEFER, Dry Grove, Hinds Co., Miss.

Mrs. W. F. STANDEFER AND SON, Dry Grove, Hinds Co., Mississippi.

I send you Photo of my wife who helps me with bees when she is able [being consumptive] and my oldest child Sylvester, who attends my Queen nursery, and either sets to rights any irregularity in Apiary or reports to us; shows visitors around in my absence, opens hives, exhibits Queens, explains the use of extractors, smokers, cages, etc. Many are as much astonished at the child, as the Apiary; he is 8 years old, began working with bees at 7 and is now running 2 colonies on his own account.

A. M. STEED, Front Royal, Warren Co., Va. Page 124, Vol. 2, and 23, Vol. 3.

SPENCER STRONG, Akron, Fulton Co., Ind.

J. M. C. TAYLOR, Lewiston, Maryland.

Wm. TROYER, Annawan, Henry Co., Ills.

I like bees. Was the first to introduce Bee Journals, Frame hives, Italian Bees and Extractors in this township. At one time I had 110 swarms, but the winter of 1871-2 nearly cleaned me out.

Mrs. ELLEN S. TUPPER, Des Moines, Iowa, has by her labors through the medium of different periodicals, and at associations and colleges made herself widely known and gained a great number of friends. Her life has been, and probably will be one full of active work, many times it seems more laborious and full of business cares than one of her sex ought to bear. Her health of late has been poor and we trust her friends *en masse* would be glad to see her take more rest, and enjoy her bees more in peace and quietness, undisturbed by busy traffic.

Her daughter, Miss KATE N. TUPPER, a graduate of the Iowa Ag. College, is now studying Medicine. May her life be as useful and yet unclouded with the many cares that have at times devolved on her mother.

REV. J. VAN EATON, York, Livingston Co., N. Y., although a minister seems always running over with fun as may be seen from the sketch from his pen on page 28, Vol. 3, and the following which accompanied the Photo.

On the opposite page is the last development in that line of Darwin's system of evolution. It is all I have. I use them as posters on marriage certificates. It must be at safe distance from Grimm and Gallup and all the aristocracy of the great bee-dom—perhaps you'd better slip it round on t'other side. If I only could whisper to P. G., that same picture might stand a nice chance for display.

W. S. WARD, Fuller's Station, N. Y.

GEO. T. WHEELER & WIFE, Mexico, N. Y. P. 29, 149, Vol. 2.

R. WILKIN & WIFE, Oscaloosa, Iowa. Friend W. too, has seen the "ups and downs," especially the latter, but we hope to hear he is improving of late. P. 24, 33, 82, 93, 96, 103, 106. J. WINFIELD, Hubbard, O.

W. D. WRIGHT, Knowersville, Alb. Co., N. Y. P. 50, Vol. 2.

The following names were omitted by mistake, or were sent in after the above were in type.

Miss ANNIE C. MANN, Yarmouth Centre, Ont., Canada.

I began with 2 swarms and have in four seasons worked up to 23. I am strictly a "novice" at the business, and the worst is, the more experience I have the less I seem to understand it. "That bee disease" has not been in my Apiary. I winter out of doors on their stands. I use the Thomas hives, double and single. Prefer the single for wintering. I bought an extractor lately, and am going to try to use it next summer. I wish I could see some one else use it first. I am so pleased that "P. G." is a lady, I do not know of one lady in Canada who keeps bees, tho' there may be.

A. A. RICE, Seville, Medina Co., O.

Mr. R. has been in the business but few years, but if our veterans could make every thing succeed as he does, they ought to be happy. His Alsike Clover gives him barrels of honey and bushels of nice seed, his Long Idea hives, work to a charm, he winters without loss, and we really begin to suspect that that pleasant wife of his, (Mrs. A. A. RICE,) has something to do with it all.

GEORGE STRAY, Girard, Branch Co., Mich.

Mrs. D. N. KERN. Her husband sends the following:

My wife said she thought it was not quite fair, that she thought she did take as much interest in the "curtain arrangement Apiary" as I, and so I send both.

Quite right friend K., we certainly wish to give the ladies every possible encouragement.

ANOTHER "BLUE EYES," daughter of W. H. Sedgwick, Granville, O. He writes:

I think I never opened a hive last summer that she was not right at my side, in the way.

"OUCH!" is taken from a Chromo published by J. F. Ryder, 239 Superior St., Cleveland, O. It tells its own story.

In conclusion dear friends, allow us to say that we are aware of having picked up these brief sketches, in a very hap-hazard way. The thought only recently occurred to us, and amid a crowd of business we have picked up whatever happened to lay conveniently. If we have omitted now and then to say a word in regard to some of our best friends, excuse it on the ground that nothing lay convenient to hand. Besides a lot that we wanted to say, and had written, was clipped off for want of room.

TABLE OF PREMIUMS.

Our reasons for deciding to offer Presents are as follows: Many names are sent us out of pure good will, saying they think it a pleasure to assist and don't want recompense. Now it is some trouble to write a letter, pay postage, get a money order etc., and we prefer to pay every one for such service; yet you know we cannot send you 5 or 10c. by mail as pay. But we can send something to your little girl or boy that will cost but little, and yet may please them more than a "whole dollar." We have been for years in the Jewelry business and hope our taste and ability to select useful, pleasing and instructive presents may prove happily directed. You can count all subscriptions sent during the year, and back volumes, the same as the present one; as for instance, if two of you send for Vols. 1, 2 and 3 each, it will make a club of 6, and

will entitle you to any of the \$1.00 articles, providing you pay 75c. for each Vol. Where no premium is wanted we send all three Vols for \$2.00 including Lithograph. Designate by number what premium is wanted; if you leave it to us, we may send you something you have already. Only those who have made out ten names, are entitled to send them at 50c. each. Otherwise, we shall only send it for 8 months.

TABLE of Premiums and Terms.

No Exceptions—No Competition.

Open to all.

No.	Names of Premium Articles.	Prices of Premiums	Number of Subscribers required	
			at	or at
			50c.	75c.
No.	Any of them sent free on rec't of price.			
1—	Lithograph of Apiary, Implements etc, 30	10	2	
2—	"That Present," (Explains itself).....30	10	2	
3—	Small Horseshoe Magnet, a scientific toy 30	10	2	
4—	A Finger Ring of Coin Silver, our own make.....30	10	2	
5—	Emerson's Binder for GLEANINGS, will hold 4 Volumes.....50	20	3	
6—	" " " " better quality.....60	25	4	
7—	Pocket Magnifying Glass.....60	25	4	
8—	Any Volume of GLEANINGS.....75	30	5	
9—	Best Quality Emerson's Binder for GLEANINGS.....75	30	5	
10—	Pair of Gold plated Sleeve buttons, small size but durably plated.....75	30	5	
11—	Coin Silver Watch Chain, plain and very light.....\$1.60	35	6	
12—	Double Lens Magnifier, on 3 brass feet 1.00	35	6	
13—	Photo Medley of America Bee-Keepers 1.00	35	6	
14—	Pen and case, Morton's Muke, pen gold, case plated.....1.00	35	6	
15—	Gold tooth pick, in plated case.....1.00	35	6	
16—	Plain Gold Ring, our own make, light, but full 18 K fine.....1.50	40	7	
17—	Any two back Volumes of GLEANINGS 1.50	40	7	
18—	Case of Drawing Instruments.....1.75	50	8	
19—	A real Compound Microscope, beautifully finished, and packed with Impregnated Mahogany box.....3.50	100	10	
20—	An Achromatic Telescope, finished like above.....3.50	100	10	
21—	A coin silver Watch Chain, two strand, with Slide and tips, our own make...3.50	100	10	

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Implements for the Apiary.

In presenting this list, we would remark that we have carefully thrown out or remodeled every thing found in any way defective, and we offer nothing that we do not approve of and use in Our Own Apiary.

We can ship promptly, by Freight, Express or Mail, (none mailable except those designated) goods mentioned in the following list. Hives, Extractors, etc., can be sent much cheaper by freight, but in this case they should be ordered three or four weeks before needed, if the distance is considerable. During the months of April, May and June, orders may sometimes be delayed several days, but our customers may rely upon receiving notice at once on receipt of all remittances.

At the prices given below, cash *must accompany every order*; as the sending of goods C. O. D. entails an additional expense, and goods many times fail to be taken, we must be excused for refusing to send any that way. When hives or frames are ordered in quantities, the additional expense of boxing is such that we can make no better rates on large orders. Orders for frames or hives of dimensions differing from those named, will also be liable to some additional delay, especially during the "Honey months."

PRICE LIST.

As much diversity of opinion still exists regarding hives, so far as size and shape are concerned, we shall still furnish the five different shapes of "Dollar Hives," as described in our circular for 1874, which will still be mailed on application.

To those who ask our opinion, we would state that, as yet, we have no sufficient reason for preferring any thing to what we have called the Standard. Prices as follows:

In order to hasten the introduction of the STANDARD

Apiarian Implements, we make the following offer. Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground.....\$2.00

Twenty frames for above 5½ c. each.....1.15

Sample Frame, by mail......12

Quilt......40

Or all complete except painting, for.....3.50

The same in a bundle including nails, hinges, etc, 3.25

Extractor made expressly for Standard frames, (holds frame 13¼ wide, by 11¼ deep).....\$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

Frames of any desired dimensions, with Metal

Corners......06

Sample frame with section of metal rabbet, including sample of transferring clasps, (by mail)....15

To save the expense of shipping so great a bulk, frames will be packed ready to be put together, unless hives to contain them are to be sent made up, but the price will be the same in either case.

Metal Corners put up in packages of 100, *i. e.*

enough for 25 frames, (by mail 20 cts. extra).....1.00

Per 1000......9.00

Per 10,000......80.00

Cast Iron Blocks for putting Metal Cornered

frames together, (by mail 10 cts. extra).....15

With every order for 100 frames or more, one of the above will be included without charge.

Rabbits for frames to rest on, made of folded strips of metal, per running foot......02

Folding the strips adds greatly to the strength, besides furnishing a smooth, hard surface for the end of the frame to strike when replacing it, and preventing the bees gnawing the projecting ends of the frames, as well as the supporting edge. In ordering, name length desired.

Quilts for any of the hives mentioned, (by mail 6 cts. extra)......25

The same double width......40

" triple width......60

Metal Clasps for transferring, package of 100,

(by mail 10 cts. extra)......25

These are made to fit our frames or any other just ¾ of an inch.

Novice's Honey Knife by mail......1.00

Half dozen, by express......5.00

We will add that our Honey Knives are sufficiently keen and sharp to uncap honey with facility, without resorting to water, either hot or cold. The handle is of Ebony, and the whole is very strong and finely finished.

Tinned iron hoops made expressly to go around top of can for Extractor, two sizes, 17 and 20 inch, each 50c., per doz......5.00

Tea-Kettle Bee-Feeders that will feed a colony under favorable circumstances 25 lbs., or sufficient for winter, in ten hours.....1.00

Extractors for any of the frames mentioned.....10.00

These machines are all of metal, and as the bearings are all of tempered steel, they are very light and easy running. The gearing has been recently, considerably improved, and every part is most especially arranged for rapid and easy work, while strength and durability have been duly considered. It may be as well to inform our feminine friends that the machine was not only much of it designed, but its construction has been constantly supervised by one of their own sex, who assists in the extracting department of our own Apiary. The entire weight of the machine is only about 16 lbs., and the entire inside work and gearing may be lifted out, leaving a stout tin can with a substantial bottom, and iron bound at the top, worth for a variety of purposes, nearly what the whole machine costs.

We can furnish a cheaper form, with flat bottom can, of cheap tin, for.....6.00

There has been so little demand for these that we have not kept them on hand.

Gearing for Extractor, including all castings to fasten it to the can (by mail 40c. extra).....1.50

In ordering Extractors, castings, or inside work, give *outside* dimensions of frame or frames to be used in them.

With inside revolving frame and steel pivots,

bearings, wire cloth, and all except the Can.....5.00

Galvanized iron wire cloth, made expressly for

Extractors, per square foot (by mail 5c. additional) 15

Fine tinned wire cloth for Queen cages, same price.

Molasses Gates for Extractors (by mail 20c. extra).....50

Superior White Oak barrels for honey, hold 375 lbs. 2.50

The same waxed and painted.....4.00

Spring Balances, a nice article.....8.00

These Scales are made weather proof and when arranged to suspend a moderate sized colony, may be left out all summer; as the figures on the dial are plain and large we can see at a distance the average yield of honey per stock, each day or hour even; when weighing stocks for winter, they shorten the work very materially.

Scissors for clipping Queen's wings. These are

small, fine steel and very fine pointed, by mail.....40

Lithograph of Apiary, Implements etc., by mail.....30

Alsike Clover seed, the best, less than 10 lbs., per lb. 35

" " " " over ".....30

" " " " by mail, postpaid ".....50

Summer Rape seed, per lb., by mail, in cloth bag.....35

" by express.....15

Queen Register Cards, [for description and illustration see cover of June No., Vol. 2] per doz.....10

Lamp Nursery for hatching Queen cells.....5.00

This is a double hive made of tin, with a space beneath the walls to hold water. A lamp keeps the water at any desired temperature at an expense of about one cent per day. Without a doubt, the machine would hatch eggs, (perhaps it would also scratch food for the chickens) we haven't yet tried it, but it hatches every thing in the "bee line" quite satisfactorily. See description in Vol. 1, page 74. In ordering give accurately length of top bar to frame.

Queen Cages, [see cover to June No.] each by mail..12

Galvanized tacks, just the thing for the Apiary,

(by mail 2c. extra)......10

Thermometers (by mail 3c. extra)......40

Universal Feeder (by mail 3c. extra)......10

We believe, and hope this inexpensive arrangement may prove fully adequate, for all purposes. For description, see page 102, Vol. 2.

Medley of Photo's of Bee-keepers, size 8 by 10.....1.00

Bee Veils, (see cover to May No. Vol. 2, and page

2, Vol. 1), by mail......75

Wax Extractor, for description see April No. of

Vol. 2......3.50

Honey Labels, with name and address, per 1000.....3.00

By mail 25c. per M. extra. Samples free.

Small Larva for Queen rearing, by mail......25

These can only succeed in warm weather, say June, July, Aug. and Sept. The piece of comb containing them will be safely packed in a wooden box.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc., etc.

Respectfully, A. I. Root & Co.

GLEANINGS IN BEE CULTURE

or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. III

May, 1875.

No. 5

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

*[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]*

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Southern Farmer,

Scientific American.

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SUNDRY MATTERS.

We cannot, at present, receive money for Queens, nor can we in justice give a preference among our advertisers; our readers can rest assured that all who offer Queens in CLEANNINGS, we know to be trustworthy.

All advertising and subscriptions *must* be paid for *in advance*. If you do not ask to be made an exception to our general rule, we shall be spared the pain of refusing to accommodate a friend, in what seems to him a trifling matter. We are not ill-natured, but when our income is made up of only a few cents profit on each transaction, that little must be *sure*, and not encumbered by any such laborious machinery as keeping accounts. Look over the price lists we send you, observe carefully the conditions we have been obliged to require, and we will take great pleasure in giving you every thing on our line at the very lowest rate possible.

We think Mr. Quinby in his new circular magnifies the difficulty of getting out the first comb in suspended frame hives. We experience so little difficulty of this kind in our own Apiary that we have scarcely thought of it, and we can hardly remember to have heard the objection mentioned by others, yet hives with suspended frames are in use by thousands. We have taken the pains to make inquiry of our neighbors, and even those who do not use the metal corners, say, since they have straitened their combs as they should be, they never think of having any difficulty of this kind.

We like his Smoker because it is "right to the point" and does not get sparks on the sawdust and quilts; we dislike it because it is a bother to keep it going, because it gets filled up with soot, and because it costs \$1.50, but until somebody can give us something cheaper and better, we shall advise it for those who are not satisfied with the bits of rotten wood in a pan, or the Buffalo chips recommended by Mr. Langstroth, and described by D. Lyons Browne on page 92, Vol. 2. Price of Quinby Smoker \$1.50, by mail \$1.60. We keep them at these prices.

"FRESH ARRIVALS" FOR THE MEDLEY.

JUST as our Medley was nearly finished, our friend Langstroth appeared, and at his earnest request we have consented to delay it, until some of the pioneers in the early days of the Italians in this country, and several others can be added. The following are at hand.

ENRICK PARMELEE, No. 19 West 38th Street, N. Y. City, writes as follows:

If you put men in your group who have no more claim there than I, you will be at least "a thousand strong." Such an army, if all pulling one way, ought to move something. The Bee has been with me a source of recreation, as music or any other taste with others. But little that is going escapes my attention. I wish we could combine in an effort to study fully the bee of every country and not rest satisfied with our present knowledge. There may not be any money in the large bee of slant lately noticed in one of our Journals, or in the bee from the Isle of Cypress, but it would be a satisfaction to know as intimately their habits and what part of our country is suited to them, as we know the bees we now handle for profit and pleasure.

R. H. MELLAN, Amboy, Lee Co., Ills., expresses very nearly our views, but he don't tell

what to do when you are near cider mills.

This winter has just about cleaned out all the bees in this section. Cause, *want of care and nothing else*. Many here, as well as elsewhere, seem to think that successful bee-keeping is a mystery. Give me good colonies and plenty of stores (as Muth says) in the fall, and a dark dry and warm cellar. That is the mystery of wintering bees. If the honey is clustered there is no mystery. If I feed poor hay to my cows or any other stock, is it a mystery that they come out of the winter "spring poor?" and especially if I have not given them proper protection? I lost no swarms the past winter and all are in first rate condition, plenty of honey and young bees. Have fed three bushels of oat and rye meal.

R. H. M. April 17th, 1875.

A. C. ATWOOD, Vanneck, Ontario, Canada.
GEO. WILLIAM HORNER, Dubuque, Iowa, a full fledged Yankeeized Dutchman is herewith forwarded to Medina, Ohio, and entrusted to your tender care. He is Methodist by profession and a centotoler in practice and has been for over ten years, enjoys a hearty laugh and when he "smiles" it is not through a tumbler.

J. H. THOMAS, Brooklyn, Canada West.

PROF. J. P. KIRTLAND, East Rockport, Cuyahoga Co., O., see page 18, Vol. 3.

N. E. PRENTICE, Castalia, Erie Co., O., page 51 and 105, Vol. 2.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpareil space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

POLLEN.

I will send, free of postage, on receipt of 75c. a root of *Chinese Wistaria*, a magnificent climbing vine, grows from 15 to 20 feet in a season. Profuse bloomer. Bees work on it from morning until night while in blossom. Will send none but good vigorous plants. All should have one or more of these gorgeous blooming vines. Orders filled in rotation.

Address, J. P. McELRATH,

4 p

Asbury, Warren Co., N. J.

VICK'S
FLORAL GUIDE FOR 1875.

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GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

MAY 1, 1875.

No. V.

FRIEND KELLOGG'S "BEE YARD" AND OTHER MATTERS.

FRIEND NOVICE:—Hurrah for GLEANINGS! it's a—*brick* I was going to say, but how can a paper be a brick? We are looking anxiously for the "Medley," wouldn't miss having it for \$25.00. Only think of it, we are to have the pleasure of looking at the faces of many of the "old stand by's" who taught us our A, B, C's in bee-culture. Mr. Langstroth's picture alone is worth much more than the cost of the "Medley." We don't see Anna Saunderson's name in the list; why is it? She told us she had sent her photo to you. Hope you have not left her "out in the cold."

But you needn't think you have *all* the "Medleys" to yourselves, for *we* have one too. Our "Bee Record" book is about 6x8 inches, and on the cover and fly leaves I have pasted cuts of hives, slingers, Queen nurseries and cages, wax extractors, honey knives, honey labels, etc., etc., taken from circulars, and back pages of the Journals. I tell you it's fun to look at them all close together, for each one seems to be trying to speak first, saying, "here, try me, I'm a better hive than that one over there"; and to see the different styles and quirks that men have got up and called the *best* bee hive. Then the extractors step in for a share, each one trying to make you believe it will sling more honey and in better shape than the others. Did you ever try such a "Medley" Novice?

Thanks for the specimens of honey labels; I send one of mine.

Novice seems to have given up the cold frame in disgust, but *we* are going to try it once more, if we did lose two out of three wintered in it. But, mind you, those three were our very lightest; and put in the pit to give them the best chance. The pit was not dug till we had to go through eight inches of frost. The four put in bee house came through strong and bright, and one likewise in cold frame. If Bro. Bidwell can use the pit successfully, "why in sixty," can't we?

Will those straw mats shut down close enough to keep the bees down, or do you have to put a cloth underside?

You say you have thrown away your quilts, when they were covered too thickly with propolis. Don't you know it can all be taken off slick and clean by boiling in strong soap suds and concentrated lye? It can be, and leaves the cloth the color of a beautiful "yaller dorg."

WILL. W. KELLOGG.

Onelda, Knox Co., Ill. April 5th, '75.

We did not include Miss Anna in our Medley, for the identical reason that we did not several other "bee-women's," "*P. G.*" included, because they wouldn't let us have their photo's. There were no end of excuses, and of blame thrown on the artists, but they finally ended up by declaring they were not "good looking." Had we *all* been governed in the matter by such weighty arguments, we fear our Medley would have much of it been blank paper.

Mr. K's label has one feature that pleases us; it says simply "from Kellogg's Bee Yard." How is it fellow bee-keepers, are we proprietors of "The Great Spread Eagle Apiaries," or are we simply owners of a "bee yard?" In our correspondence with Grimm, Hetherington, and Harbison, we do not remember to have seen any name at all given their respective places of business. Perhaps *they* don't need any, but it would be a great relief many times

if all of you would use envelopes and postals, with your full address printed thereon; we are also, Yankee enough to like to know every body's occupation, and we confess that we rather like the idea of a pretty name to the Apiary, if it conveys no erroneous idea.

We can readily understand that Mr. Bidwell succeeds, by keeping his "pit" covered with straw and boards the greater part of the winter, but we cannot help thinking his success would be equal, did he dispense with all glass entirely, which would amount to the same thing as carrying the bees out whenever suitable weather occurred.

The straw mats do not shut down as closely as quilts, and we can not find that bees winter better than with the quilts, when soft clean ones are used and the quilts are much the handiest for summer use. Yes; benzine will also clean them, but it is cheaper for *us* to use new ones about once in 3 years.

OUR OWN APIARY.

IT is now the 6th of April, and the weather has been for the last 10 days, all that could be desired. Never in our experience have we seen bees work on meal as they do now; since March 30th, as mentioned in the last number, they have seemed to get crazier and crazier each day, and as no natural pollen made its appearance until yesterday, we have had ample time for sundry experiments with different kinds of meal. Wheat flour seems to come next to the rye and oats, and then comes corn meal, and buckwheat, oil meal etc. The latter was only tried after they had commenced on natural pollen, which may make a difference; they certainly use it, but do not seem to fancy it as they do *fresh* rye and oats. We fully demonstrated the latter point by trying to make them take meal that was ground a year ago; they would use it, but only when the new was not to be had.

The condition of the hives is most encouraging; solid masses of cells of this artificial pollen are found along the top bars and end bars of the frames, and the balance of the comb is an entire sheet of eggs with perhaps larvae of the size of small beads occupying the centre. Almost the entire Apiary presents an unvarying scene of activity and prosperity, if we except three hives; one of them is the hive containing natural stores that we have several times referred to, as having been brought from a neighbor's Apiary; they have become so reduced by dysentery, that nothing but brood from others can save them, and we may here

remark that we have probably made our last experiment to determine the superiority of sugar over natural stores. Others may do as they choose, but *we* shall provide sugar for feeding in the fall, or at any other season when feeding may be advisable. One other colony, although strong and rearing brood rapidly, is bringing out daily what we might term *sick* bees. Their bodies are elongated almost like Queens, and they crawl about in front of the hive in the sun, for several yards, but eventually die, and this occurs even during our warmest days. The ground is getting covered with them, and yet their comrades are gathering pollen as briskly as any hive in the yard. Their stores are sealed, every thing looks healthy inside, and yet this mortality continues to go on. There are no symptoms of dysentery, and the puzzling part of it is, that cold days or nights do not seem to aggravate it at all.

Our third bad one, is the Quinby hive, in the abandoned forcing house. Since the south side has been opened, we have a more even temperature inside than outside, but this even temperature ranges too low for brood rearing: even during our warmest weather, the influence of the underground apartment is such as to keep the air inside at about 45 or 50°, when out in the open air, it is up to 70 or 80°. Here is where we see the advantage of hives with thin walls; frequently the weather changes suddenly, or the sun warms up the air in the morning so quickly that hives with double walls, or those placed in a shaded position will not be stirring until the bees have been at work an hour or two in the others. A winter repository of course should be as free from atmospheric changes as possible, as we wish the bees there to sleep; but in April and May, the case is different and we would give them all the sun possible. If the colony is strong, we cannot discover that an occasional frosty night does any harm.

April 8th—Continued beautiful weather and prosperity. The new lot of brood is now just beginning to be sealed over. In examinations, we have been puzzled to find in many stocks, dead larvæ in the center of the cluster, generally full grown, and in some cases sealed or partially sealed over; we might have feared foul brood, had this looked black, but it is *white*. We think the solution is this: most of our colonies had brood in different stages when taken out of the house, and about the 24th of March we had several zero freezes; now in moderate colonies, this perhaps killed all unsealed larvæ, and may be none of the other. Accordingly after the zero weather was over, brood rearing was started anew from the egg; as this severe weather occurred just about two weeks ago, our oldest larvæ should be just being sealed, which is really the condition of most of our hives. The moral seems to be, that bees should be kept in-doors until all prospect of zero freezes are past; as we frequently have such weather of late years in March, will it not be best to keep our bees in-doors as a general thing until April? These remarks, of course refer to this latitude.

April 9th—One colony is found Queenless. They have plenty of bees, and have been bringing pollen briskly, but examination shows neither eggs nor brood. As their Queen was nearly

3 years old, it seems to us the case only points out another moral. As a remedy, we took the weak colony out of the Quinby hive just at dusk, combs, bees and all, and set them gently into one side of the Queenless hive. As we were led to expect by former experiments, the bees soon scraped acquaintance by crossing antennæ, and very soon the news of a new *fertile* Queen spread through the hive; the mourning note of Queenlessness ceased, and soon there was a rush of all hands to see if the good news was really true. When satisfied, so boundless was their rejoicing that they took wing and filled the air as they would of a summer afternoon, although it was nearly dark. In the morning the Queen had laid a broad circle of eggs, and these bees were the first in the Apiary to scamper in with huge loads of pollen. Of course we were obliged to put on an upper story, and stand the Q. frames on end, to get them into an L. hive. It is our impression that a Queen can thus be introduced into a hive that is *Queenless* and *without brood*, with scarcely a failure.

Of course we expected the flying bees from the Q. hive would be lost, and Mrs. N. was lamenting during the forenoon, that nothing could be done for the homeless wanderers that went in and out of their deserted home, with such a doleful and disappointed hum of distress. About dark on going into the Apiary to see if we could not do something for these lost ones, we discovered a brisk going out and in of the hive that had been Queenless; on looking at the Q. hive we saw quite a cluster of bees on the combs, and they were really having a fine time in conveying the honey from these combs to the new hive where their Queen was. Was it purely accidental that no other hive in the Apiary had any hand in this, or had these little fellows really taken in the full state of affairs, found where their Queen was, and agreed on moving *en masse*, carrying along their honey, and joining hands peaceably with the bereaved colony? We accept the latter, for not a bee remained in the Q. hive over night. The hives are perhaps 5 rods distant, and the Q. hive was in the forcing house entirely out of sight of the other.

April 10th—The one hive containing natural stores, has been united with another, to save it, so we have now only 51 colonies; as one of our remaining Queens seems to go rather slowly, we think one more doubling, so that we have an even 50 to commence the season with, will perhaps be advisable.

April 19th—We have had another very cold spell, even as low as only 14° above zero; our weakest colony died out-right, (which leaves us with an even 50,) and all were more or less injured. Our strongest colony had brood clear down to the bottom bar of their central combs, and so near the entrance that the severe freeze, drove them back away from it allowing it to freeze; the consequence was that we found a small heap of bees in front of the hive, and among it we found brood almost matured. At first we thought they might have suffered from want of water, or even stores, but examination, showed plenty of stores, and water that had run down on the bottom board at the back end, so we are forced to think the trouble was that their brood was more than they could cover

under the circumstances. This was an L. hive, and all the rest have suffered more or less in the same way, unless it is the Standard hive which has combs running across the other way, and has the brood separated from the entrance by several empty combs. The large supply of pollen is getting low, but is not quite exhausted.

April 20th—Mr. Langstroth has been our guest for the past week, and many are the talks and pleasant contests we have had on the many unsettled questions pertaining to bee-culture. The ground he went over years ago, and the great multitude of experiments he has made in times past, many of them to decide points which we have supposed had never been considered before, are astonishing; and particularly his wonderful powers of memory in referring to the exact place in which the subject has been considered in the earlier volumes of the *A. B. J.*, or in the earlier editions of his work. Since the freeze, our bees have ceased getting the natural pollen and he suggested that we give them a substitute in their hives. We at once expressed incredulity, and when he mentioned a mixture of honey and rye meal, we told him we had tried it over and over again, but without even the slightest trace of success. He smiled pleasantly, directed Mrs. N. to sift the coarse particles out of the rye meal, and make a "feed" of honey and the meal that should not be thicker than good syrup. This was put in a feeder and given them when quite warm. Sure enough they take it up like chickens, and ask us as well as they can for more, and we are watching with interest to see whether it is *really* used as pollen or only as honey. Mr. L.'s idea is that the mixture is taken directly into the stomach of the nursing bees, to eliminate the milky food for the larvae.

April 21st—During the severe wintry weather we are having now, the Universal feeder will not work; the only way to feed, is to turn up the quilt and pour our "gruel" directly on the cluster. Now it is not desirable to tear up the quilt in cool weather, as you all know, and that the bees object to such unceremonious disturbances, *we* well know from past experience, having one season fed all our Apiary in this manner, all through March and April. Do you remember what Thaddeus Smith says of old hats on page 29? Well, Mr. Langstroth in speaking of our quilts, says that he has been fully convinced for years that a shallow cavity is needed above the combs or some device for the bees to back up into, like a flock of sheep in cold weather, and also to enable them to avoid the repeated disaster of getting separated from the main cluster by combs etc. Now Mr. L. says, and with reason that part of the quilt should be raised a little from the top of the frames, for wintering, by laying crosswise two corn cobs about eight inches long and six inches apart. Where quilts are pretty well covered with propolis, a more efficient ventilation would be desirable for this cavity, and Mr. L. insists that every quilt should have a hole in the centre about 1 inch across, and that this hole be always kept filled with coarse wool, this, he assures us the bees will not in any way meddle with when used for such a purpose. In the spring, the cobs are to be removed and this hole in the quilt enables us to feed or

get a look at the bees without disturbing the edges of the quilt which are waxed down close and secure. We have always objected to having any hole cut through the quilts, but if this wool will really remain undisturbed by the mischievous ones to be found in many hives, we may become a convert to it.

Almost any kind of feeder may be used over this hole, or a piece of spare comb with a hole through it may be laid over the hole in the quilt, and the meal and sugar mixture, gruel perhaps we had better call it, may be poured into the cells, or a table-spoonful may be poured directly down upon the bees. Were we to sum up feeders, perhaps we would say that out-door feeding is the least trouble, when the bees can fly, and where there are not too many neighboring hives to join in; when the latter is an objection, the Universal feeder comes next; if it is desirable to feed during cold spring weather, the plan just mentioned seems most direct and effectual.

L. L. LANGSTROTH.

WE take pleasure in laying before our readers the following from our old friend and benefactor.

FRIEND ROOT:—I heartily thank you for your kind words of generous appreciation in the April No. of *GLEANINGS*. Still I cannot consent to receive any pecuniary contributions. Should I ever be reduced to such straits as to need help from those who think that they have been benefitted by my writings and inventions, I would accept it in the same spirit in which it would be proffered.

I am no longer able to give my personal supervision to bees, and have no intention of building up another Apiary. A neighbor is willing to take charge of a few stocks for me, that I may be able to supply my own table with honey. If any of my bee-keeping friends who are abundantly able to do so, would take pleasure in sending me some bees, or a few hives with good empty combs in standard Langstroth frames, I should not only be glad to receive them, but would try in some way to reciprocate the favor—perhaps by sending them another year a choice tested Queen.

With thanks to God for restored health, and with kindest greetings to all bee-keepers who may see these lines, Very truly your friend.

April 15th, 1875.

L. L. LANGSTROTH.
[For Gleanings.]

PERSONAL.

This heading, over my signature, may remind some, of my personals in the *A. B. J.*, in 1872. With no intention of reviving past animosities, I desire to say that soon after these personals appeared, I regretted some things in them. For the first time in my life, instead of a statement of facts with what seemed to me the necessary conclusions from them, I used bitter epithets and invectives. Coming from a man of my age and profession this was the less excusable. Perhaps I never lost so good an opportunity of showing the best way of conducting such controversies as we deem necessary in defence of our rights.

About two years ago I personally expressed to Mr. H. A. King, my regret for the invidious comparisons in which I had indulged, and my intention of withdrawing them as publicly as they were made. Able again to use my pen, I am glad to carry out this intention. If my example has encouraged the acrimoniousness with which questions have been discussed, and controversies carried on among American Bee-Keepers, I hope this personal may contribute somewhat to soften such needless asperities.

April 23rd, 1875.

L. L. LANGSTROTH.

A REPORT OF THE SEASON OF 1874, ETC.

BY J. D. KRUSCHKE.

FRIEND NOVICE—Last spring I wrote you that our troubles (mine and yours) in "Springing" were of a remarkable similarity. Now I started like yourself, with 58 colonies a year ago; well, last spring they dwindled down to 29, besides one we sold. Friend Duffeler, in Dec. No., gives a good report of the spring—how cold and unfavorable it was for bees. When honey was gathered to any extent, I don't think I had 5 strong stocks in my Apiary! Now mark the result: From these stocks (30) 61 were made, and all have plenty of stores; most have 10 frames, size $16\frac{1}{2} \times 10$ inches inside, and all are strong enough to winter, under favorable circumstances. I am sure each has a fertile Queen—raised all Queens myself except two—bought one Italian from Ch. Dadant, and earned another. I tried to have a few nuclei for winter, but they built up so fast in numbers, and as I could easily help them from other stocks, I made full stocks of them. One stock I made in this wise: I took off most of my honey boxes at one time, placed them close together, put a hive with comb and a caged Queen over them, and covered the whole with sheets—all done out-doors—and the bees all collected in the hive, when the Queen was released, and all was well. Like you, friend N., I had plenty of comb, but a good deal of it was ruined by the moth, for want of a proper place to keep it, so that I allowed each hive to build a comb or two. Of honey I got 650 lbs. box, and about 700 lbs. extracted, the latter I took only from such hives as were too weak, and that I could not induce to work in boxes. Spoiled 8 good stocks for the season, as regards box honey, by being just *one day* too late in cutting out my Queen cells to supply them! so they were compelled to raise their own Queens, and they did not make a pound of box honey, while some made over 100 lbs.; what a difference from such a slight cause.

So far then, we might consider the season's work a great success; but now comes the drawback: I had to sell my honey very cheap, or at least it *was* sold at a very low figure; the comb for 18c. and extracted 11c.; a small proportion of the box honey was sold for more, and half of the extracted I sold here for which I realized from 15 to 18c. per lb. Next year, shall try to sell all my money at home; most of the bee-keepers around here did so this year, and made considerably more than I did. The market for honey here is increasing finely.

On the 18th of Nov. my bees were all put into their clamps, in apparently good condition. I made the clamps a little warmer, and I think a little dryer. The temperature thus far, has stood mostly at 40° ; shall try to keep it a little higher hereafter.

Now for a few comments on contents of Nov. GLEANINGS. H. Hudson tells us how to secure strat combs. Now with my plan, I have so far found no trouble; my hives had 10 frames and one partition-board; and for wintering it is only necessary to allow 8 frames to remain so that two frames of comb are left to start another hive with. In spring 6 or 7 frames will be enough for a stock, so that we have 3 or four frames to start another stock with which is quite sufficient to make them build strat comb through the whole hive, if evenly distributed. I use Dadant's comb guides (see page 57 last month) on my frames and in the honey boxes, and find they follow them nicely. S. F. Newman, speaks of bees gathering meal in the fall, my neighbor, Mr. Potter, had them do so to quite an extent. To induce them to work on it, he smears a little anise oil around the meal. I tried this last spring, and found the bees went to work almost immediately; and too, after having kept honey exposed in comb for some time. Our bees gathered great quantities of honey from Golden rod and Aster, (I just learned the name of the latter by your description) so much, that one hive, which had not worked in boxes previously, stored about 35 lbs. from these plants alone. We had some 25 acres of buckwheat in the neighborhood, which was a great help to the bees. I had about $\frac{1}{4}$ acres of rape, and running the risk of having it said, that I have an "ax to grind," I will state, that although the season was dry, and the seed came up very unevenly, yet at no time during its bloom did the bees "quit their hold" upon it; and at all times more bees could be seen in it, than on the buckwheat. While on buckwheat they worked mostly at morning and evening, on the rape they worked *all day*.

In regard to Problem No. 25, I would say, it has been quite fully discussed in *A. B. J.*, by Ch. Dadant and others, and the conclusion seems to be, that it is *rather unsafe* to winter bees without pollen.

Bee-Keepers! All of you are troubled more or less

with leaky covers. We have tried something the past season which has, so far, worked satisfactorily to prevent this trouble, so much so, that we have put all our covers under cover where we can get them in the winter, and give them the same treatment. What is it? Why! It's simply common brown building paper. Take a roll of paper, lay it on a smooth work bench, lay your cover on it, and cut the paper so it will project about an inch all round; now turn up this projection nicely, and nail a strip of wood over it, so it will "hug up" smooth to the cover top. Then prime it with thick paint—yellow ochre is good, and cheap, give it two such coats, and when dry it will shed water like a top. You see by the process, you can use the poorest kind of boards, and the paper will cover the *iniquity*. I would advise to paint the paper on the *under side* before putting on (then on top of course) and use narrow boards for cover, to prevent their warping.

Last spring we tried the experiment of feeding bees out-doors and found it a perfect success. As you have been already informed, our bees were weak, but instead of starting robbing among them, I verily believe, it *prevented* it; for they *did not rob at all*, whilst without this supply, we certainly would have seen some fun. We placed the food about 10 rods from the Apiary, and I think "thereby hangs a tale."

J. D. KRUSCHKE.

Berlin, Wis. Dec. 17th, 1874.

HOW TO GET ALONG WELL.

NO, No! We don't mean any thing of the sort. To be sure if we should dig a well in the ground, and dig it *very deep*, it would be a "long well," but that is not what we mean, we mean, how to get along pleasantly with the "all sorts" of people that begin now to make up our list of patrons, and we wish to consider, *all* our patrons, friends. For instance; if very many people persist in writing good things on both sides of the paper, and thus prevent our "scissoring" their communications, etc., shall we scold about it, and try to mould several hundred people to our wants, or shall we endeavor to mould our wants to fit the people, and let them do things in their own way, or as they can most conveniently?

If those who write us letters will persist in supposing that we remember all that was in the letter they wrote us a week or two ago, shall we call them stupid for not knowing that we have so many every day, that we can't remember all of them, or shall we take a little more trouble ourselves, and file our letters away, so that we can find any letter referred to after a reasonable length of time? If folks will omit to give their addresses in full sometimes, even sending money, and then after awhile abuse us for not sending their papers, shall we write back that 'twas their own fault, and it's "good enough for them" etc.; or shall we provide ourselves with a list of all the Post Offices, printed lists of all who have ever been subscribers and every thing we can think of to save both time and annoyance to our fellow beings as well as ourselves even if the middle is purely their own fault? Again, if by losing 3c. we can save a fellow blunderer 6c., ought we not to do it? [There is an exception to the latter, where you are purposely, and *repeatedly* asked to lose your hard earned nickels.] Even supposing you find a person *awfully* stupid (as you may perhaps think *we* are sometimes), shall we tell him so, and that he hasn't "even an idea of business," or shall we take it for granted that such an individual may be expected to turn up about once in so often, and it is our duty to treat him as a brother? Shall we not consider that the poor fellow will doubtless have trouble enough any way with his ideas of

things, and that if we throw a little sun-shine about his path, it will cost us but little, and may tend to make his life average with the rest.

We fear an Editor many times loses sight of the fact, that it is a much easier matter for him to conform to the habits of a thousand of his subscribers, than to have the thousand *all* conform to some project of his own. We have many times thought of making requests to our subscribers, such as asking them not to send us checks for the small sum of 75c, when it costs 25 or 50c to get them collected; that they would not ask us questions that were plainly answered on our price list; that they would not expect us to reply individually to all their kind letters etc., etc.; but on the whole, we will just say keep on in your accustomed way, and we will try to conform to it. If you are busy, and don't think, put your money and questions both in the middle of a long letter, *written on both sides*, and then change your mind in the post-script if you choose, or refer to a former letter. We cannot promise positively, but we will try and preserve *all* letters. We are going to try too, to remember the dimensions of the frames that each friend uses, so when he orders an Extractor, we shall not be bothered if he don't tell. Thus: we remember that Rev. J. Van Eaton, is 12x12 *inside*, whereas R. S. Beektel, is 12x12 *outside*, Prof. Cook, 11 $\frac{1}{4}$ x11 $\frac{1}{4}$. Dadant is somewhere near 12x18, and James Bolin, is 17 $\frac{5}{8}$ x9 $\frac{1}{8}$, etc., etc.

HOW TO BUILD WORKER COMBS EVERY TIME AT A 2-40 RATE.

FRIEND NOVICE:—Having a number of stocks last fall, not full of combs, and the buckwheat honey failing, thus stopping all comb building, and wishing very much to get them full before going into winter quarters, we set ourselves to thinking, and as a result we, a few days after, happening to meet that good friend of ours "Squire Jesse," (one of those *tip top* good natured bee-keepers you sometimes meet with,—like us for instance) I proposed to him that we each should take one of our *strong* stocks and take *all their combs away* but two or three, fill out hives with empty frames and feed, and see if we could not get those much needed combs built. After deliberating a while, the "Squire" replies, "No Sir—ee, not any of that for me—guess I'll wait awhile before taking my little pet's combs all away, leaving them in such a fix as that, this time of year."

"All right 'Squire,' if you don't wish to experiment, we will risk one stock any way." Accordingly, one of our *strongest* stocks was selected and deprived of all their combs but three or four containing the *oldest capped* brood in the hive, which was selected to keep up the strength of colony while at work; used balance of brood (6 or 7 combs) in strengthening up *weak* swarms, then filled out hive with empty frames interspersed with the frames of brood, putting 2 frames between each 2 frames of brood—put on feeding box and fed them *just at night* a quart or more syrup made of 1 lb. sugar (Ex. C.) and 1 quart water. Being anxious as to result (so late in season) we next morning looked into hive and found to our pleasure, they had a piece of comb about as large as your hand in each of several frames and *all worker*. Being so much pleased with result, we immediately set *several more* at it, using extra brood as with first stock. In the course of 3 or 4 days the "Squire" happening around, we proposed to let him have a peep into first stock set to building. When the hive was opened up and frame after frame of beautiful worker comb was shown him, all nearly completed, the "Squire's" eyes began to open a little, and after showing him through the other builders, (all seeming to vie with each other as to which should fill their hives first) and getting up from our knees and looking the "Squire" in the eye, he astounded us by saying, "Well Eddie if you are a mind to, you may come up and start a few of my stocks in 'biz'." Wishing to oblige so good a friend—"up we went" and the result following was a nice lot of strait worker combs.

By above plan we got 125 nice worker combs, using nearly 200 lbs. Ex. C sugar, making cost per comb from 16 to 20c, (combs 10 $\frac{1}{2}$ x11 $\frac{1}{2}$).

Cannot make an *exact* estimate as we allowed all stocks fed to make up their winter stores from amount fed; but after estimating amount in hives and deducting from whole amount fed, arrived at above result.

Perhaps some of our bee-keeping friends may say 'tis most too risky a job at that time of year, (last of Aug.) if so, try *one* colony to begin with and our word for it, all being favorable, they will become a convert—as the "Squire" did.

As our honey dependence is on white clover mostly, and ending first of July, with nothing more for our little friends to do (till blooming of Buckwheat, you will readily see how much we can gain by keeping them busy in the interval, at comb building, thus giving us all the combs we need at smaller cost than in any other way, and the stocks building (as well as the weak ones, receiving the benefit of the added combs of brood), are in better condition when through than they otherwise would have been.

Out of 15 to 20 stocks used as described *only two* made any effort to build drone comb, and they only a small amount; stocks having Queens either *young* or *old*, built worker comb the same, saw no difference.

Trusting this may help some of the "fraternity" in their time of need as much as it did us, we remain

Yours truly, J. OATMAN & CO.

Dundee, Ills. March 15th, 1875.

The above, which it seems to us is only carrying out the plan of our friend Dean, we think will work without doubt, and it will most certainly contribute much toward getting the colony in good wintering condition. In using the Universal feeder last season, we had a similar experience, only that we aimed to prevent comb building, having a fair supply.

TENNESSEE AND THE MIGRATORY PLAN.

BEES never wintered better. Not a single colony lost in this vicinity, and all wintered on their summer stands. Commenced gathering honey and pollen the last week in March from the "*Fescaria Lescurii*" (Bladder Pod) a small yellow bloom (see specimen enclosed) and said to be found nowhere except in central Kentucky and Tenn. The honey is light and very nice.

We shipped 70 colonies to Indianapolis, Ind., on 13th inst, where we expect a better yield of honey during the summer. They had gathered about ten lbs. per hive before shipping, partly from the fruit trees, and swarming had commenced. We expect to return them to Tenn. in Sept., in time to get the Aster honey. The cost of transportation by freight is 50 cts. per colony, one way, and we think the increased amount of honey will pay it, and the security of wintering here will be ample pay for trouble. The late Dr. Hamlin has never lost more than one in one hundred at this Apiary for 10 years, in wintering.

BARNES & PEYTON.
Edgefield Junction, Tenn. April 17th, 1875.

LABELS, QUEENS, AND CALIFORNIA HONEY.

FRIEND NOVICE:—Your gilt labels are the finest I have seen and very *cheap*. I think we shall not disagree on the *standard* label even if we do on the *Standard* hive.

The Queen you refer to in March GLEANINGS, came from Aaron Benedict. I am pleased with his bees, but his packing was not uniformly good. I should rather have a Queen from some reliable American breeder, who has worked for a series of years to secure the perpetuation of desirable characteristics (as Davis of Penn. and Benedict of Ohio claim they have done) than to have an imported queen at the same price. And I say this without taking into consideration the various diseases and enemies of bees now found in Europe, the introduction of which is now only a question of time. We undoubtedly have better Queens in this country than can be obtained from the peasants of Europe. Then why send to the Continent and take such risks unless in exceptional cases?

I have seen the bee house of Italy at work in our own Apiary under circumstances that *seem* to indicate its having survived at least one of our winters. Judging from what I have seen and read of its habits I do not consider it possible for a colony considerably lousy to live through a winter in the Northern States. It would be kept in constant agitation, a condition

fatal to successful wintering. Therefore taking all things into consideration on the subject of the "Indiscriminate importation of Italian Queens" I pronounce myself fully in accordance with the views of Mr. Adair, although on the knotty question as to who shall own the two dollars sent him for his quarterly, we still continue to disagree; a subject by the way, on which he has not heretofore been inclined to write lengthy and prolix articles in our Bee Journals.

Happening to be in New York when the market was pretty well stocked with California honey, we made some inquiries in relation to it. We found it chiefly made up of the grades, extra white, or white mountain, white, and colored, the last being largely in excess. Its appearance was certainly very fine, equal to any thing produced East. The packages were small, neat, well filled and rec'd in good condition; whole car loads were being coming through without a broken comb or a leaking package. The report of its quality was not so favorable, as a large majority of those who have either handled or used it say that, like much of the California fruit, it lacks flavor, lacks that peculiar aroma so characteristic of the best products of this latitude. Sugar syrup with a small quantity of Northern honey added, would closely represent the flavor of a larger part of the white grades, the same mixture with a small addition of Cuba honey would give an idea of the colored. We do not apprehend that it will much if any affect the price of our choice grades of honey, as it cannot successfully compete in quality; nor do we think it will ever be offered in so great quantities as some have anticipated. Much will depend, in regard to price, on how firmly Eastern bee-keepers hold back for good prices. No doubt some dealers will try to buy at California prices, and should a large number of producers sell thus, it may temporarily depress the market.

P. H. ELWOOD.

P. S.—I have wintered largely in double wall hives and although the result has not been entirely satisfactory neither has our in-door wintering. I should prefer to hear from those with a more lengthy experience. Starkville, N. Y. March 15th, 1875.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, MAY 1, 1875.

A new commandment I give unto you, That ye love one another.—John xiii., 17.

JOURNALS for April all good, and on hand in good time.

RAPE seed is not to be sown until June; directions will be given next month.

WHEN the Quinby smoker is *all in trim*, by its aid you can open hives, and handle combs and bees very rapidly.

A BARREL of sugar, two coffee pots, and Universal feeders to match, are the arguments we are now bringing to bear, to counteract the effects of the freeze.

TO-DAY, the 28th of April, we find a colony with brood in three combs—nearly half filling the middle one—with brood all chilled except a small spot where the Queen and a few dozen just hatched bees were clustered. Old bees gone just a little too soon.

MR. LANGSTROTH agrees with Quinby, in thinking a hive with $\frac{1}{2}$ inch walls, preferable to any thing thicker for out-door wintering. Mr. L. would also have them unpainted, so far as keeping the bees dry

is concerned. He has made many, and some costly experiments with double, and porous walled hives.

ALTHOUGH we dislike to throw cold water on the work of the makers of the comb foundations, it were no more than justice to all parties, to state that Langstroth mentions that he made an experiment with two equal colonies, giving one the foundations, and the other nothing. While the former used their artificial aids, the latter outstripped them by far, in filling their hive. It may be well to try this again, but we would advise investing cautiously at first.

A FEW have taught that swarms without combs, do better than with a hive furnished; Mr. L. explains this by saying that during a heavy yield of honey the Italians will fill a set of combs so quickly that brood rearing is almost entirely blocked, consequently unless the extractor be used, the swarm with an empty hive would assuredly be the most profitable. With an extractor and empty combs, as we demonstrated last season, almost any natural swarm would pay for itself in ten days.

LEST it be said that friend Bolin's success in wintering is accidental, we give the following from the *Tiffin Star* of March 25th:

There is a very universal complaint, throughout this county, that the winter has been extremely hard on bees. From what we can learn, we doubt whether a tenth part of the number of swarms which were in good condition last fall, are alive at this time. In this immediate vicinity there will not be an average of more than that saved. The last few weeks have seemed to do the business for most swarms.

THE Dwindling Down in our OWN APIARY.

BUT we have got it after all. It is now April 27th, and since the "great freeze," we have for several days noticed bees on the walks, clinging to the fences, and in divers places, that looked like any thing but "gathering honey all the day," etc. An examination of the hives shows that the old bees are almost entirely gone, and so suddenly has this taken place, that it looks almost as if they had swarmed out in some cases; hives that were prosperous, with brood in three combs, two weeks ago, now show brood with no bees to cover it, and all that remain to take care of the Queen, are a few downy bees apparently just hatched, and two colonies we actually found dead just when the young bees had begun to gnaw out. A third was united with another to save it, so that we are now only 47. Does this begin to sound like the story we told a year ago? Never mind, we are not alone, to judge from the tenor of the postals now coming in, and we are really glad to be able to have the trouble right under our own observation.

Now although all our colonies (with one exception) have lost all, or nearly all their old bees, they are by no means all weak, and the very best colony in the Apiary is that one in the Standard. They too lost their old bees, yet as their young brood commenced hatching in March, they have bees now over a month old, and able to perform all kinds of out-door labor; and when the freeze came, there were so many of them, they did not even stop brood rearing at all. By the way we went to look at the colonies that had the gruel; sure enough they had unsealed larvae in all stages, while other colonies of equal strength had only sealed brood and eggs. This would have been convincing proof had we not examined the Standard next and found it contained even more unsealed larvae, and yet they have had no gruel; in fact they don't need gruel or any other kind of tinkering. "Do you give this credit all to the different hive?" some may ask. Certainly not, but we do give it to putting two good colonies into one, in Nov., see page 123, Vol. 2. A 20 frame Langstroth hive would perhaps have done as well, unless it be that a deeper frame is better where 20 are to be spread out horizontally. This hive actually has an entire Queen cell built, with an egg in it preparatory to swarming. What do you think of that while ordinary colonies, are scarcely making a "live?" Now then! has any one faithfully tried the experiment of putting two good colonies into one, and wintering them out of doors? It may be we are getting over on to Gallup's ground, but we are sure, we would as soon it should be he that is right as any one. Perhaps such a colony would do well even in a double walled hive. Who knows? We do like the Standard hive because it is always all ready for extracting, for wintering, or for any thing else, without

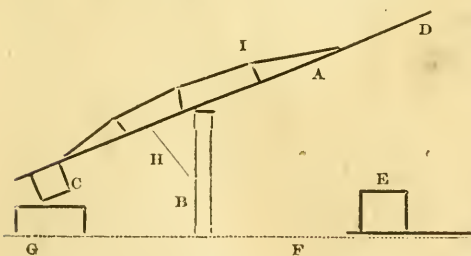
any back breaking, or lugging combs or top stories about in the mud, which we always have in Medina Co., both in fall and spring.

That one exception where the old bees do not die, is the colony that was found Queenless and without brood, see page 62. Mr. Wurster's statement, on page 12, that it is our brood rearing that uses up the bees, is corroborated. This colony has not hatched a young bee this spring, and yet they are about as prosperous as when set out in March. We forgot to mention that they have taken to the meal again with avidity, and it seems to us, that this substitute at such times, must be of very great value. All the pollen in the hives is exhausted, and the maple blossoms are frozen up in full bloom. It is amusing to see bees that are so young as to be all downy, gathering meal; poor little innocents there is no one else to do it, and even if their loads are tiny, they seem to feel in full their responsibility. "What can we do to help these weak colonies?" our postals enquire. A knotty question; we can give them hatching brood from the stronger stocks it is true, but many times it does them as much harm as it would to take a small swarm from them a month later. Taking them in-doors may do, but in a large Apiary this is no light task. Blanketing them, unless the covering is removed as soon as the air gets warm, does more harm than good, for it often keeps them cold, as it would a block of ice, because they have no internal heat of their own, or but little. Had we not better reduce our stocks in the fall until we have only extra heavy ones, with abundance of pollen etc? A dozen such colonies in the spring we verily believe, would be of more profit than 50 ordinary ones.

P. S.—We are going to let our Standard swarm, just to try our Automatic swarmer. Perhaps we can get a Photo of the whole affair for the Medley.

D. A. JONES' AUTOMATIC SWARM CATCHER AND HIVER.

LET A, represent a pole arranged to swing easily in the top of the post, something like an old fashioned well sweep. C, is a box to contain stones enough to keep the end D, up, unless about one lb. in weight be applied to it. E, is a hive so located that the pole D, will strike it gently on the top, when it descends with the weight of the swarm that has clustered on the end at D. The dotted line F, represents the ground, and G, is a block or platform that C rests on, to prevent its getting stuck in the ground or entangled by grass or weeds. In front of the hive E, is a platform nicely arranged for the bees to run into the hive. At B, is a bell or pistol that will be rung or discharged by the string H, on descent of D, to tell the owner that his swarm is safely in the hive, and ready to be cared for.



To test the working of the machine, we have had one put up in our Apiary. We used for the pole A, a strip of pine board 3 inches by 20 feet long, stiffened by an inch strip I, bent over blocks as shown in the cut; this makes it light and not liable to be much influenced by the wind. The post B, is of oak 3x4, and the hinge at the top is made by driving a $\frac{1}{2}$ inch iron rod through the strip A, which is allowed to turn in iron plates, screwed to each side of the top of the post. This gives us all metal for

the working parts, so that they cannot swell and get tight, even with years of exposure.

The main point, is to get the first swarm of the season to alight at D; to secure this, we would advise tying on a bundle of mullein heads, dipped in ink, so as to resemble bees. Mr. Jones suggests that some bushes be tied above etc. Experiment will doubtless suggest the best material. We give below a part of Mr. Jones' letter.

A. I. ROOT & CO:—Dear friend, I wish to asst Mr. Langstroth, and I have an invention that I think it my duty to give him the benefit of. I call it a swarm catcher and hiver. It catches the swarm that issues and hives them! It then rings a bell or fires off a gun or pistol to let you know the work is done, and you can go and set the swarm where you want it, and put another hive in place of it ready for the next.

I have tested it for three years, and it works like a charm. I have kept it quiet and intend to use it only for the benefit of Mr. Langstroth in the United States. If trees are thick, more than one should be used; one for about every ten stocks. I put it in the most conspicuous place, the bees light on it, and after a sufficient pumber alight, their weight brings down the machine in front of the hive, and a stop striking the pole jars off the bees and they run into the hive. Sometimes it does not jar them off well, but it always fires off the gun or pistol (Wouldn't the boys be doing this for the fun of it? better perhaps to have no explosion—L. L. L.) to let you know they want attention.

It is indispensable where there are no trees or bushes, but if there are bees in the yard next to you, you would be liable to get their swarms. I hope in such cases justice will be done.

They can be made for a trifle, and if properly made will save many a swarm. It is so managed that the end of the thing the bees light on just comes down to the entrance of the hive.....I believe that we could do a large amount of good to Mr. Langstroth by it. If you wish to patent it in the United States you can, I don't want any thing for it. I have no object in view but to do good. The money sent for Mr. Langstroth, should pass through your hands.

Truly yours, D. A. JONES.
Tecumseth, Ontario, Canada. April 10th, '75.

Mr. L. replies as follows:

My experience in inducing swarms to cluster upon some fixed place most convenient for hiving them, makes me think favorably of Mr. Jones' invention. Being unpatented and easily and cheaply made, its practical workings can be quickly tested. Next month I may show the best methods of using it.

It would be a work of supererogation indeed, to say anything of the generous spirit of Mr. Jones' offer. I cannot however, think of patenting his Hiver. To patent inventions however novel and valuable, which can be so easily made is usually *vanity and veration of spirit!* a strong temptation to many to violate the legal rights of patentees. Let no one send money to GLEANINGS for L. L. L., until he is well satisfied that he can make the plan work in his own Apiary. Mr. Jones has succeeded, and if his very ingenious device proves successful in the hands of careful Apianians, then another great advance has been made in practical bee-culture.

L. L. LANGSTROTH.

April 21st, 1875.

Mr. Langstroth, for reasons which he hopes to give more in detail, will not secure a patent on the Automatic Hiver, and we take pleasure in presenting it to the public, trusting that those who find it valuable, will in accordance with Mr. Jones' wishes, express their gratitude, and hand in their dollars to Mr. L. through the medium of GLEANINGS. We consider the idea worth to us \$10.00 at least, and have handed that amount to Mr. L., by Mr. Jones' request. If Adair were yet among us, he might now advocate strongly letting Queens have all of their wings. Three cheers for the revival of the old fashioned swarming time! happy are the memories of our childhood days that cluster about it.

As American postage stamps are of no use in Canada, Mr. Jones requests that all queries, in regard to the invention, be made through GLEANINGS.

[For Gleanings.]
ABOUT HIVES ETC.

BY G. M. DOOLITTLE.

WE have many inquiries in regard to our views about hives and as most of our correspondence comes from those who take GLEANINGS, we will answer through its pages.

Quinby, Langstroth, Gallup, and others have told us that the brood chamber to any hive should contain at least 2000 cubic inches. Let us look for a moment and see if they are correct. A hive containing 2000 cubic inches will give us about 1350 square inches of comb which is 450 inches more than the best Queen we ever had, would keep occupied with brood for two months in succession. An average of Queens will not occupy over 800 square inches with brood for any length of time, therefore it will be seen that we have 550 inches that will be filled with honey and pollen; and we are told by those same writers that this same honey is to be used to winter the bees on. Now if we have a new swarm in a brood chamber of 2000 cubic inches and the season is good, in three weeks they will have 400 square inches of comb filled with the best of honey. This is not in salable form unless you use the extractor and in that case you need a hive larger than 2000 inches. So each year your bees are wintering on about 25 lbs. of the choicest of honey, worth at least if put in boxes \$3.25, while \$2.00 worth of sugar syrup would winter them just as well. Thus, year after year we are losing \$1.25 per swarm by using a brood chamber of 2000 cubic inches when working an Apiary for box honey.

In order not to get any pollen in our boxes we will allow 150 square inches of comb for that and the little honey they always will have in the upper corners of the frames, so we have 950 square inches comb space or 1411 cubic inches, as the right size for the brood chamber when worked for box honey, regardless of what style of frame is used. We prefer the Gallup frame to any other but should not advise any one that had from 35 swarms upward to change frames, if they were movable in any sense of the word. The cap and sides of the hive can be made as large as you choose, yet we prefer box room of from 60 to 80 pounds capacity. In one of our articles we say if the bees swarm they do well, but forget to say that we never allow but one swarm from any hive, for with a second swarm goes all prospect of box honey from the old stock.

Our bees have come through the winter in fair condition considering that our stocks were very tight in bees last fall and that we have had an unusually severe winter. We have lost two outright, one being Queenless and the other dying of dysentery. One swarmed out the first warm day leaving plenty of brood, pollen and honey and went in with another swarm. Combs were all clean and bright and the swarm was an average one. Can any one give a satisfactory reason for such proceedings? We found a number that were Queenless and united them with others so we have at present 92. As we have worker combs for only about 75 or 80 hives, we shall eventually unite them down to that number. We do not allow over one or two square inches of drone comb to each hive (unless it is to some favorite Italian Queen) and when we get all straight worker combs we are sure of them as long as we wish to keep bees, only as that dreaded disease foul brood makes its appearance. How often has our heart been made to ache by being obliged to destroy our nice combs; those we have spent much time to make perfect as we could wish.

Dear readers, those of you that never saw a cell of foul brood, you do not know how to pity those that have annually to destroy the combs of from three to ten stocks.

Let every one sending out Queens be very careful not to send a drop of honey from a foul brood stock, as most Apianians are careless with such honey as they receive with Queens, and one single drop taken to a hive will eventually ruin that stock.

Borodino, N. Y. April 6th, 1875.

HONEY is usually quite scarce during this month in the Northern States, and it often commands a good price. If we are to supply the people with it the year round, somebody most probably will have to keep a little over. Take good care of that *home market*, friends; see that the jars are neat and clean, and that your dealer, or commission man does not have the wrapping off from too many at a time, nor allow them to get soiled and dusty. Honey

should always look the neatest and cleanest of of any thing in a country store, and you must make it your business to keep it so, if your merchant won't.

Humbugs and Swindles **Pertaining to Bee Culture.**

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

MITCHELL has taken out another patent; it is on his 50c. bee hive. As an individual right to use this is included for the 5 or \$10.00 that he receives *from each* person for the lesson of two hours given the "class," he has the excuse to offer that his "right" is an equivalent for the money received, even if the instruction is worthless.

It seems almost hopeless, the task of convincing people that there are no great mysteries, or secrets connected with bee-keeping, but that success is only attained by honest hard work, which these traveling secret and patent venders are too lazy and dishonest to accept. Even ministers of the Gospel—by the way it seems as if they of all others, were the very easiest prey for such men—are really paying a premium to such vagabonds for going about the country. If we are to believe Mitchell's new circular, he has actually induced a Rev., from Elmore, O., to act as travelling agent for him. If our Clergymen wished to learn Greek or Latin, would they pay their money to some travelling man who promised to teach it to them in a couple of hours? We cannot see that bee culture differs very materially. As we have said before, we feel confident that you are at liberty to make any thing needed in a bee hive, without paying any body for a *right* to do so.

Reports Encouraging.

I sold in spring of '74 down to 13, from these I took
 832 lbs. extracted honey which I sold for.....\$127.33
 Box honey in frames 117 lbs.....222.99
 Broken comb honey 174 lbs.....27.44
 Sold 19 colonies for.....151.75
 Wax.....30

Total.....\$529.81
 Paid out for Queens.....7.00
 Balance.....\$522.81

I still have an increase of 4 stocks, and I have made no account of about 300 lbs. that we used and gave away. My bees had only comb enough in the spring to fill their hives and two upper stories besides.

In the spring of '73 I took my first swarm and cared for them to the best of my ability and sold in two seasons, \$125.00 worth of honey and increase. We have had a very good season here. I have a way of, what I call, keeping the bees' ambition up to its highest pitch in the honey season, that is of keeping them trying to fill some place according to their capacity. For box honey I start them at one end and so follow along toward the other. If it is a medium swarm they will have some finished by the time they reach the last end and with a division board I can make them think a little more will finish the whole job, and often I let very large swarms build for weaker ones to finish.

I can have swarms of not more than two quarts fill their stent for the extractor, side by side with very large swarms. I give every one room according to their ability.

I winter in a cool and very dry cellar. But Mr. Editor bees want the room in which they are kept, well ventilated as well as the hive.

J. L. LEWIS.
 West Windsor, Eaton Co., Mich. Jan. 24th, '75.

Heads of Grain, FROM DIFFERENT FIELDS.

MESSRS. A. I. ROOT & Co.:—Although my profits in bee-keeping last year were small compared with those of many bee-keepers, still a report of my observations may be interesting to some.

If only the largest reports were given, we would get only exaggerated ideas of the business; so I will tell you what I have accomplished while taking a college course. My Apiary is located at Mason, a distance of only 12 miles from the college, so I was enabled to give them a little personal attention. Aside from this I hired about twenty-five days labor.

I began last spring with 20 colonies, increased during the season to 50, and lost 5 by wintering. I sold from them about \$160.00 worth of honey. Placing on the increase (25 swarms) the low valuation of \$8.00 per colony, we have \$200.00 for bees. This, plus \$160.00 for honey, minus \$35.00 for labor gives a profit of \$325.00.

A number of early swarms went to the woods, and through this and other such sources I probably lost as much as \$100.00. The honey was mostly in the comb. I have one of the Novice Extractors and I think it would have paid better to have used it more had my time permitted.

But, in spite of the difficulties that one must necessarily meet while trying to follow two diverse occupations at a time, I hope to show you next fall, when my course of study here is completed, that my bees have paid my college expenses.

EMMET FULLER.

Agricultural College, Lansing, Mich. April 5th, '75.

The following is a fair sample of some of our "troubles." It was on a postal.

MR. ROOT:—I have not rec'd the Feb. or March No. of GLEANINGS. Some post-master must have gone out of office on the line.

W. O. SWEET.

We find Providence R. I., on the other side, but we have no subscriber there by that name and what shall we do? A short time ago, we were able to remember something about those with whom we had corresponded, but the number of postals we send out now daily, makes it entirely out of the question to remember what we wrote a week ago, and to whom we wrote. In referring to something we have written you, please mention the fact, or if convenient *enclose the postal* and it will assist us very much. Letters without signatures, and without town or state, are getting to be alarmingly frequent, and the worst trouble is, the writers are sure to think the blame lies with us, or any where but with themselves.

You had better not try to ride the "hobby" that "plenty of bees and plenty of honey will *always* answer for bees to remain on their summer stands." I have been trying to succeed with a similar plan for the last 15 years and have generally succeeded pretty well until this winter, it has thrown me flat upon my back. I never had the bee disease before. I have always packed my bees together with straw on three sides and top, leaving the front end out and entrance open. I have lost about 50 out of 81 packed in the above way and more will fail yet. I think it was caused by the long continued cold weather. Three-fourths of the bees in this section are dead, I did not "tinker" them either, but packed them away quietly the 23rd of Nov. last. I think we will all have to take lessons of friend Bolin in wintering. I would like to see the phiz of those that can *keep* bees, so please send me the Medley.

N. E. PRENTICE.

Castalia, Erie Co., Ohio. April 5th, 1875.

But we did not say *honey* friend P., nor did we *think* honey. "Scaled stores," means sugar syrup fed in the warm weather in the fall, instead of honey from all sorts of weeds.

Bees are swarming, got five new ones already.

DR. J. M. JANCOSO, Los Angeles, Cal. Mar. 23, '75.

Do you know how Mr. Quinby's bees came out last spring? He said he was going to keep some in cellar until flowers made their appearance.

C. E. POTTER, Eureka, Wis.

We have not heard from him directly in re-

gard to the matter, but think such experiments have been on the whole rather favorable. The present season it would have been best to have left our own bees in-doors, until about March 25th; after that we had about 10 days of beautiful weather for meal, before natural pollen. We think it has been much better for them to have been thus employed, than to have been kept in-doors longer. We are at present decidedly in favor of housing bees in this locality from Nov. 1st, until about April 1st. Even should the weather be quite warm in Nov., we find no difficulty in keeping them quiet in a good close dark room.

It is with fear and trembling that we put the following in print. We have just been up on the tower, screwed up all the bolts and made everything tight, and now we are ready for the "gale."

I disposed of my bees last winter and I find it lonesome without my busy pets. I'll tell you what! there is no use trying to keep bees without a *woman* to fix things. That's so. If I should coax some nice little Queen (woman) to "swarm" with me from the "old hive," I am going to get another swarm of bees; and finally, if you divulge any of the secrets of this delectable epistle, I'll tear that irrepressible wind-mill all to "eternal smash."

We have been making some arrangements to ship our bees North to Indiana in the spring and back to Tenn. in the fall, thereby getting at least ten weeks more work out of them in a year, which we think will pay for the transportation. Last fall the bees in Tenn. stored about 50 lbs. of honey from the Aster, between 15th of Sept. and 1st of Nov., to each colony, where the extractor was used in time. Several swarms came off in our Apiary at Gallatin, Tenn., in Sept., one of them filled 10 frames, L. hive, and 30 frames surplus honey—making all the combs.

Forty-seven colonies in same Apiary, stored 2600 lbs. of extracted, and 400 lbs. box honey, and increased to 55, in 1874. In same place (Gallatin) the Rev. J. W. Shearer commenced the spring with *one colony*, increased to five and extracted 43 gallons of honey, and most of this was from the Aster in the fall months.

BARNUM & PEYTON.

Edgefield Junction, Tenn. Feb. 12th, '75.

TENNESSEE ITEMS.

FRIEND NOVICE:—I have to-day (Nov. 17th) finished extracting—91 colonies of Italians have increased to 116, and yielded 3500 lbs. of honey, 500 of it comb honey. The spring was very unfavorable for bees in this portion of the South, many colonies that were not fed during April starved on account of having too much brood to care for, then a severe drouth set in quite early. The fall pasturage was excellent. Wild Aster is very abundant throughout the state. Strong colonies had the honey extracted two or three times while it was in bloom. Hives that have not been extracted, have their combs filled and sealed to the bottom. If there should come much freezing weather this winter large losses of colonies that have been managed (?) on the "let alone system," may be expected.

FRANK BENTON, Edgefield Junction, Tenn.

From reports, we judge the result friend B. feared, has already come to pass.

Bees with us were never in so good shape this time of year before, brood in one to three frames and some hatching. *Storing* honey also in past two days, from soft maple and willow—'twill shake out the combs like summer.

J. OATMAN & CO.

Dundee, Ills. April 8th, '75.

Then friend O., we have just been thinking that it *must* be new honey that glistened so brightly in the cells, but had we ready means of deciding that it was not honey that had been brought from some other part of the hive. True enough if it is new honey, it will readily shake out of the cells, have we not many a time dandeb new honey all over the clean clothes Mrs. N. had just insisted on our "donning," by simply turning a comb over to get a good look at the brood? Reports come from

all around, that never before was seen so beautiful an April, for bee-keepers. With the new honey, our own are bringing great masses of pollen, that we think comes from the slippery Elm, (*Ulmus Fulva*) and in our eagerness to see it in the cells we tumbled out a lot of it from the other side of the comb; as it rolled about on the ground, we concluded we had better stop upsetting their household treasures. We never *did* see such continued loads of pollen, as now (April 10th) stream into our hives, day after day.

MR. ROOT, Dear Sir:—I have no doubt there are hundreds like me who would prefer 20 lbs. box honey to 100 lbs. extracted, per hive. I have had from one to ten of the double width hives for seven years and have broken the whole up this fall. They are not as populous in the spring and do not gather so much box honey nor any more extracted unless they are neither of them meddled with for the season. The reason appears to be, in a large hive there is room for the bees to cluster at night, deserting the boxes unless very hot. In a small one they are forced to stay there and if the boxes are occupied by night, there will be honey put in them if there is any. If they are deserted nights, there will be none put in, no matter how large the swarm or how much honey. E. C. NEWELL.

Brookfield, N. H. Dec. 17th, '74.

But friend N., supposing you put in a division board, and only give the same amount of room that you do in a single story until they really need it, and then enlarge one comb at a time.

I clamped my bees last fall in the same place as the winter before; we took them out the 7th of this month. All in fine order, 35 in all. They are all from that one box hive purchased the first of June, 1873. You will see on page 9, Jan. No., where you say "If friend M. really means *that*." Well it looks big, but they are there, and sure enough they came all from that one box hive and this spring it is stronger than ever before. It is easy to tell a bee master how it was done—simply having plenty of empty comb, extracted honey, and flour—but to tell a *new* novice would be a hard job for me.

In the spring I made flour starch, and while hot added the same quantity of honey and fed out-doors, had them fly about 30 yards. I think they breed much better than when fed in the hive. I extracted till about 10th Sept., about the last of that month fed about 5 lbs. to each hive, of white sugar syrup, which I think they store near their brood nest and that puts them through the winter. The honey that is in the out-side combs, they can get when they fly.

JAMES McLAY, Madison, Wis. April 12th, '75.

Another direct report in favor of sugar, and open air feeding.

Bees, I am sorry to say, are about played out in this part of the country. I have been through and examined many hives of dead bees, and find the bee malady or dysentery the principal difficulty. I opine that the cause of dysentery is dry weather in summer and fall, which stops brood rearing too soon and causes the bees to work on cider and ripe fruits, which makes bad winter stores; then, a long cold winter that gives no chance for a fly, and it is not very strange that the bees perish. My stock consisted of 17 colonies which I put in cellar about the first of December, slept quietly and all right until about 25th of Feb., when they became damp and restless. The weather remained too cold to give them a fly until the 10th of March; 7 out of 17 went up. However, that will all come right when we learn more about bees and get better prepared to keep them. My present location is a good one I think, as there is a large linden grove near instead of a elder mill. B. F. LINDSEY.

Bushnell, McDonough Co., Ills. April 12th, '75.

Thanks for facts furnished. All now agree, we believe, that sugar is *just as good* for winter stores, and enough cheaper to pay the expense of feeding. Supposing you invariably *feed* through Aug. and Sept. in all localities and during all seasons that furnish no natural stores, have you any doubt it would be an excellent investment? Even in this month, if

there is a period of warm weather, during which the bees get no honey, feed by all means; don't let brood rearing stop.

March 27th, set bees on summer stand, 31 in all. So far as I can see, all is well except one which I lost fair and square, but can not account for it.

Would not take ten dollars for Quinby smoker if it could not be replaced.

T. J. DODDS, Le Claire, Iowa.

I wish you could see where friend Muth winters and keeps his bees the year round; he has them arranged on shelves on the top of a three-story house, exposed to all kinds of weather, and the cold north winds whistling and blowing hard enough sometimes to carry them off, yet his uniform success is a surprise to every one; not having lost more than one or two for several years and those not from dysentery but from having eaten their stores around them.

H. E. CURRY, Cincinnati, O.

Bees in cellar yet. Seem to be in fine condition. Most of the bees in central N. Y. are on their summer stands. Heavy losses are reported. Have examined some lots, that were in fine condition, others lose nearly all. L. C. ROOT, Mohawk, N. Y. Apr. 16, '75.

My bees are in fine condition this spring. I write this to say that bees can use coal dust as pollen. The swamp was burnt over again last fall, and the bees have been busy this spring gathering dust off the logs and other places, and they have used it too, as is shown by their droppings around the yard, when falling on painted hives, it is perfectly black after passing the bee, as it was before. J. L. DAVIS.

Delhi, Mich. April 13th, 1875.

Something new to us. Yesterday while Father and a hand were sawing a Maple for stove wood, the bees came and clawed and tumbled around in the sawdust and, as nicely as could be, they loaded up their little legs with the very finest of the dust and took it home. We could scarce believe our eyes, to-day the sawdust is almost deserted for the willows. J. N. LEWIS.

West Winsor, Eaton Co., Mich. April 7th, '75.

We have for many years been familiar with the habits of bees in regard to sawdust, and are now strengthened in our opinion by the item furnished by friend Davis, as well as the one above, that the sawdust meal etc., are used something as cattle and horses often use earth in the spring after being confined to one particular kind of food all winter. We can hardly suppose that the dry earth and the sawdust contain nutriment, yet we cannot think the bees or cattle would take so much pains to get these things were they not in some way beneficial. Can some one give us further facts or suggestions in the matter?

I am now feeling what few bees I have left, and they are building up rapidly. I am anxious to get the Extractor to extract honey to feed.

N. E. PRENTICE, Castalia, O. April 10th, '75.

We have had several orders for Extractors saying they wanted them to extract the honey for *feeding*, which is to us incomprehensible, for we have always supposed that the very nicest, and most economical way to feed was to have honey *in the comb*. These combs can with the utmost ease be placed close to the brood, and if we wish to stimulate still faster, we have only to slice off the caps, as has been previously mentioned. For building up colonies, encouraging brood rearing, or supplying the needful amount of food, we should prefer 3 lbs. sealed up, to 4 lbs. in the liquid state any time, for it is already deposited in the combs, without waste in capping, storing, etc.

I examined a hive of bees a few miles from here, which were all dead, the hive having a very unpleasant smell about it; they were all up in the top combs in clusters, covered with a sort of mould resembling sulphur, but there was no brood in any stage to be

found. The owner said they had honey after they died but the combs were empty when I saw them; there were other hives on the same stand. What I would like to know, is whether the combs will be fit to use again with safety?

Wm. D. ZELL, Lancaster, Pa. April 15th, '75.

The bees *may* have died from want of upward ventilation, but it is more probable that it was the prevailing malady. When the cluster gets small they often become demoralized apparently, and their last move is to wander aimlessly to different parts of the hive, in a miserably damp wet state. After warm weather, if not removed, they exhibit the yellow mould mentioned. Other bees, carried off the honey without doubt.

We would use the combs and honey too without hesitation but should endeavor to have the latter all used up during brood rearing. We used a large quantity last summer, and some of it when given to the bees, looked bad enough, but they soon made it all sweet and clean.

Our bees are dying of old age faster than we ever knew them, we suppose owing to their not raising any young bees last fall to any amount after the first of September; and here we will say that we could never raise brood to any amount after the first frost, either by feeding or any other means. We have succeeded in getting the Queens to lay but the bees would not hatch the eggs. We close the entrance to all hives on every cool night and keep them closed unless the mercury rises above 45° as described by us in *A. B. J.*, and when opening them in the morning we find at many of the hives from one table-spoonful to half a tea-cupful of dead bees at the entrance that died during the night. Although we have had very nice spring weather so far, we find many of our colonies reduced to mere handfuls of bees and we are afraid if the mortality keeps on we shall have a slim show when apple blossoms open. We have a few swarms taken in cellar for experiment but the result is the same.

G. M. DOOLITTLE, Borodino, N. Y. Apr. 15th, '75.

We can hardly think it advisable to rear much brood in fall, after frost, and in fact we would have them stored away in winter quarters, before heavy frosts. Closing the entrances during cool nights in the spring may be a good idea, and we would not for an instant encourage any one in thinking he might omit necessary duties; yet if hives could be made that would equally well without this fussing with, during cold and disagreeable weather, we should prefer them. With a few hives, it is but a small task, but to go around to 50 or 60 night and morning when the ground is wet and slippery we find somewhat disagreeable. Our bees too, are showing a greater number dead in front of the hive, than we like to see, but we really cannot discover that our efforts to mend matters, have much effect either way. It *may* be, that it is only the old bees dying a natural death. So many reports of experiments, or perhaps, to call things by their right names, "*tinkering*" bees in cold weather, have resulted in nothing but loss, perhaps we may be excused for strongly insisting, that they be carefully attended to when it is warm, and then let alone during cold spells. Closing the entrances the evening *before* a heavy frost threatens, may do very well, but even then we have serious doubts of its efficacy. *Strong colonies* take care of themselves in almost all emergencies. We have tried hot-beds, glass houses, stoves, and a host of appliances to enable us to nurse up weak colonies in the spring, colonies that should in the fall have been united *fire into one* instead of being scattered in five hives. Have we ever yet recovered from

that folly of follies, of calling a *quart* of bees, a colony fit to winter? We, are conscious that it hangs about "Our *own* Apiary," and we begin to feel it is the disease of all others that is difficult to eradicate.

The following is in regard to a house for meal feeding, so arranged as to keep off all wind and rain and yet admit the sun freely, and also the bees. When the bees are educated to seek such a spot, we may find it of service at other seasons than spring.

EDITOR GLEANINGS:—Having been requested to describe my method of meal feeding for bees I do so with pleasure. I use a box five feet by six with an incline of ten inches. The height may be regulated to suit the taste of individuals. For covering for a box of above dimensions I place four tiers of glass, size 16x12, the longest way, alternating with strips of board. This renders the interior of the framework very light and the rays of the sun passing through the glass also add to the warmth of the interior. On the front where entrance is made for the bees, I use half inch boards which are put in by fitting into a groove above and below. The object of this is to widen or narrow the spaces of entrance to suit the condition of the weather. On the top where the glass reaches the lowest place of inclination I leave a space of about $\frac{1}{2}$ of an inch, under the glass, as the proper place of exit for the bees when they wish to leave the feeder. On each side of the frame I put strips of board filling out the width of the frame. This however can be dispensed with and more glass used suiting the taste of the individual. The corners are fastened together by wire hooks and can be taken down or put up in a very short space of time, and when packed require very little room. When I wish them to feed upon the meal I place the meal inside the frame scattering it over the bottom, and sprinkle over it a few drops of Anise. To this the bees are attracted and in a short time are busily at work. G. W. DEAN.

River Styx, Medina Co., O. April 17th, 1875.

No bar of wood or any thing, should be placed under the glass at its lower edge, but they should be allowed to slide out, where they strike the glass, without obstruction.

Fully two-thirds of the bees left on their summer stands are dead. A neighbor having 150 swarms, loses about 100, the rest are left very weak. He was careful to tread the snow down around the hives after every storm. Another neighbor, having 8 swarms left the snow over his hives and they came through alive; still another having 4, two of which were completely covered by a drift—and two exposed, saved the two in the drift, while the two exposed died.

I wintered my bees in the cellar, never had better success. Set them out on the 7th of April and up to present date they have had only 3 days in which to fly. Some of them are weak but every swarm is alive and has a laying Queen. If I *can* only bring them all to flowers without that swarming out process, how I will sail my best bat in spite of the remonstrances of my better half, who, by the way is terribly afraid of bees and isn't very fond of honey, though mind you when we were "sparkling" there was nothing like "honey."

I had two swarms that showed signs of dysentery, though they were not exposed to a lower temperature than 35° above zero. I gave them a fly under a small sash of glass, put them in the cellar again, and they remained quiet until set out; they are not strong. Nearly all of my 10 frame hives come out with very few dead bees on the bottom board, while some of my long 24 frame hives have a quart or more, temperature of the cellar all winter averaged about 40°.

I am in a quandary, don't know whether to run my Apiary for box or extracted honey. If I could contract my extracted for not less than 16 cts. per lb., not less than 2000 lbs., I would go for that.

There is one more thing I wish to mention. I received a Quinby Smoker just before setting my bees out and have given it a trial, and I must say it's a capital device. I now have no fear of setting quilts or mats or combs on fire, it's an indispensable tool in *our* Apiary.

Tell Mrs. N. that getting stung now and then is a sure cure for bad effects of bee poison, the effect of a sting is nothing compared to what it formerly was on my person, there is now no swelling and scarcely any pain, where my eyes used to swell shut.

J. H. MARTIN, Hartford, N. Y. April 13th, 1875.

TRANSFERRING.

From the number of inquiries received, we are obliged to think that notwithstanding all we have said on the subject, something farther is needed. Those who have back volumes should look at pages 33, and 64, Vol. 1, and page 100, Vol. 2. We firmly believe *every one* of our readers can do their own transferring, and do it nicely, if they will only make up their minds that they *will* succeed. If you are awkward and inexperienced it will take you longer, that is all.

We have said so often, that the best time was during the period of fruit blossoms, that it seems almost needless to repeat it. Be sure that you have cleared away all rubbish, from about your box hive or gum, for a space of at least 6 feet all around. We should decidedly prefer to have the hive stand directly on the ground with all rough and uneven places filled up with sawdust nicely stamped down. Make it so clean and tidy that you can find a needle if you should drop it, and be sure you leave no cracks or crevices in which the Queen or bees may hide or crawl. Make all these arrangements, several days beforehand if possible, so that the bees may be well acquainted with all the surroundings and be full at work; remember we wish to choose a time when as many bees as possible are out at work, for they will then be nicely out of the way. About 10 o'clock A. M. will probably be the best time if it is a warm still day. Get all your appliances in readiness, every thing you can think of that you may need, and some other things too perhaps. You will want a fine toothed saw, a hammer, a chisel to cut nails in the old hive, tacks, and thin strips of pine, unless you have the transferring clasps, a large board to lay the combs upon, (the cover to a Langstroth hive does "tip top") an old table cloth or sheet folded up to lay under the combs to prevent bumping the heads of the unhatched brood too severely, a honey knife or a couple of them, if you have none get a couple of long thin bladed bread or butcher knives, and lastly a basin of water and a towel to keep every thing washed up clean. Now as we have said before, this is really a great part of it women's work, and if you cannot persuade your wife or sister, or some good friend among the sex to help, you are not fit to be a bee-keeper. In saying this we take it for granted, that women the world over, are ready and willing to assist in any useful work, if they are treated as fellow beings and equals. The operation of transferring will afford you an excellent opportunity to show your assistant many of the wonders of the bee hive, and in the *role* of teacher, you may discover that you are stimulating yourself to a degree of skill that you would not be likely to attain otherwise.

A Quinby smoker will be very handy, but if you have not one, make a smoke of some bits of rotten wood in a pan; blow a little smoke in at the entrance of the hive, but do not get the sawdust on fire. Tip the old hive over backward, and blow in a little more smoke to drive the bees down among the combs, let it stand there, and place the new hive so that the entrance is exactly in place of the old one; put a large newspaper in front of the entrance on the ground, and let one edge lie under the entrance to the new hive. The returning bees

laden with pollen, and honey, are now alighting, and going into the hive, and out again in dismay at finding it empty. We now want to get one comb in for them, to let them know that it is their old home. Move the old hive back a little farther so you can get all around it, and give them a little more smoke whenever they seem disposed to be obstreperous; and now comes the trial of skill and ingenuity. The problem is, to get those crooked irregular combs, out of that old hive, and then to fix them neatly in the movable frames.

Your own good sense will have to dictate much in this matter. Saw off the cross sticks if such there be, and with your thin knife cut the combs loose from one side; cut off the nails and pry off this side, but don't get the honey to running if you can help it. We have as yet said nothing about bee veils and notwithstanding we keep them to sell, we really do not think you need any, *unless* you are so careless as to get the honey running and start robbers. When the side is off, you can probably get one comb out. Lay it on the folded tablecloth, take out the comb guide, lay the frame on it, and let your feminine friend cut it so as to require that the frame be sprung slightly to go over it. With the clasps she can fasten the combs in, as fast as you can cut them out; if sticks and tacks, strings, or rubbers be used it will take some longer. When the frame is to be lifted into a horizontal position, the board, cloth and all is to be raised with it. With the wash basin and towel, keep the honey neatly wiped up. If robbers begin to annoy, keep a cloth over the two hives. Put the brood as nearly together as you can conveniently, or some of it may get chilled. When you get near the central combs, you will probably lift out large clusters of bees with the comb; these are to be shaken and brushed off on the newspaper; if they do not seem disposed to crawl into the hive take hold of the edge of the paper and shake them up toward the entrance; they will soon go in. A paper is better than a cloth, for they cannot stick fast to it. Save out the drone comb, and fix it all in a frame or frames by itself. It will do well for surplus honey, but we don't want it in the brood chamber. Utensils, and bits of comb that have much honey daubed on them may be put in the upper story for the bees to clean up, but if the weather is cool, keep the quilt down over them closely for a day or two. We would look them over carefully every day or two, and as fast as they get the combs fastened, remove the clasps, or other fastenings and bend the combs into place as we mentioned last month. Each operation is very simple and easy in itself if you go about it at the proper time and in the right way. Bear in mind that the bees from first to last, are to be kept constantly in subjection, by use of the smoke, and that you must never let them get the faintest idea, that by any possibility can *they* become master. Send them back among the combs as often as they poke their heads out, until they are perfectly subdued, and hang in quiet clusters, like bees at swarming time.

There, if we have not touched all points let us know and we will try again. If you have any trouble it will probably be because you are careless.

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Vol. III

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No. 6

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Bee-Keeper's Magazine. King.

Bee World. A. F. Moon & Co.

*[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
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GLEANNINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

JUNE 1, 1875.

No. VI.

ADULTERATION OF HONEY.

BY CHARLES F. MUTH.

DEAR NOVICE:—I will send you by to-morrow's mail a sample of dry grape sugar and a small bottle of fluid grape sugar, or glucose. This is the kind made in St. Louis, Mo. Astonishing quantities of it are sold to distillers, brewers and honey-dealers, as I have learned from the agent of the manufactory, who is a friend and lives in our city. I was trying to get the names of honey-dealers, but he is positive in not mentioning names to anybody.

A friend and good honey customer, who is a druggist, when buying a lot of honey a few weeks ago, said that he was buying of me because he believed the honey to be pure, and that he wanted to do his own "mixing." He thought, also, that I was not able to pick out my pure from his mixed honey. However, he was mistaken in that. He had taken 1 part honey and 4 parts glucose; and I must say that he had the flavor, and almost the transparency and color, in the adulterated honey; but not the "acid," which all pure honey has. One might say it tasted pleasanter than pure honey.

Glucose being grape sugar, is the next relative to honey and crystallizes with the honey. At least so my friend assures me. It sells at 7½c. per lb. in Cincinnati. The adulteration of honey is carried on to such an extent that it is very likely to injure the honey business. The reputation of the dealer is almost the sole safeguard to consumers. Our markets will be overstocked on account of adulterated honey, so that every one of us will have to retail his own produce or sell at a sacrifice. We cannot warrant our honey to be pure if sold by another party, excepting in small packages with our name on every one. It will not be long before one "brand" will sell better than another, the same as is the case with peaches and other canned fruits. A thorough posting of every body, as nearly as we can, is the only means of fighting successfully, these adulterators. I can buy at our wholesale houses here, all the comb and extracted honey I want, at my own price. It was only yesterday that one of them sent me an express wagon load of California comb honey in small frames and small glass boxes, with the request to take it at any price. I did not comply with the request. Adulteration is the sole cause of all this.

I am astonished, brother Novice, at seeing you so much in love with California white sage honey. It is a nice honey I admit, and when I got the first of it, I thought like you, that it was a little better if any thing, than our clover honey. I am now convinced that it will not sell by the side of our clover honey, and if you were offering it for sale as I am, you would be of the same opinion. I say the above merely to do justice to the matter, so far as I am concerned, and am sure that none of my friends will see selfishness at the bottom of my assertion.

HOW TO BOTTLE HONEY.

I have been owing a debt to friend Wilson, of Lexington, Texas, for some time, but as my apparent neglect was involuntary, brother Wilson will please excuse. Our friend had bottled a lot of honey. The jars having been filled and placed on the table, the honey, as in a state of fermentation, commenced to raise and run over and out of the jars, notwithstanding the honey being perfectly sweet and a choice article. The same happened to me some years ago, but does not now, as I have a little more system in the matter.

The jars are easiest cleaned by the use of sal soda and salt, then giving them a good rinsing in clear water. Honey should be bottled in as quiet a state and as thoroughly skimmed as possible. I have, for instance, a tin can holding about 600 lbs. or more of honey, into which I empty a barrel and invariably let

it stand for a few days to settle and skim. From a faucet below I then fill the jars, which I again leave standing on a counter for a day or two with the corks put on loosely to give all the air bubbles a chance to escape. I then have the jars corked, tin-folled, labeled and packed in boxes. If bottled during, or shortly after, the honey season, before crystallization has commenced at all, honey will keep in its fluid state all winter, if packed in this manner, and not exposed to the cold of winter. If packed in Oct. or Nov., it will crystallize, generally in a short time, because crystals had already formed.

If crystallized honey is to be bottled we fill tin buckets holding 2 or 3 gallons. Four of these buckets fit in a pan filled with water which is generally brought to a boiling heat, by which time the honey is generally perfectly dissolved. The honey is allowed to cool off in the buckets, when it is skimmed, bottled, tin-folled, labeled etc., as usual. Honey loses its flavor and becomes of a dark color, only if heated too fast. A slow coal fire is best for the heating process. It makes no difference with me whether I seal the bottles when the honey is yet hot or after it has cooled. It will invariably crystallize again. The California white sage honey is the only exception I know of. It does not crystallize at all. If treated in the above manner, honey, when being bottled, will not boil over as in a state of fermentation, as happened with friend Wilson; but if I should run a barrel of honey into the receiver and when filled, commence to fill the bottles, all would run over. I can only explain the matter by the fact that air gets mixed with the honey when a vessel is emptied, and honey, being the heavier of the two, settles and driving the air upward in rather a hurried manner it causes the "boiling over," figuratively speaking.

Cincinnati, O. April 16th, 1875.

The sample of Glucose referred to, we think hardly equal to the imported. It is very thick, and looks precisely like honey, but it is not very sweet—has a raw taste like raw potatoes. Very likely if it were well "sweetened up" it would make a fair substitute, but it strikes us, that it would take more than one part honey to four of the Glucose, to humbug us. We have just made an experiment, by mixing equal parts, honey and sugar syrup; this looks well, and does not candy, but to us, the flavor of the sugar is very palpable. The sample of grape sugar, we find very disagreeable indeed, but perhaps we took too "big a bite" to commence with.

We feel as though we should never tire of the California honey, but perhaps we would. Mr. Langstroth was remarking that he had some of the far famed honey of Hymettus. When we told him we would like him to taste our California honey, he at once declared the similarity was so great that this too must be gathered from the mountain thyme, and we then showed him where "San Diego mountain honey, from the white sage," was penciled on the label.

We are satisfied that it is an advantage, to allow honey to stand in some large open vessel for some days before barreling, but we shall never think of bottling any more with-

out sealing it while hot, as we do fruit. It is well known that maple syrup put up in this way, will retain all the original flavor of early spring. We have had all the experience we ever wish to have, with jars of honey with sticky labels, and with honey oozing out at the tops, so that they stick fast to the shelf on which they are kept. *Seal it up hot*, and this will never happen.

OUR OWN APIARY.

MAY 6th. Drones have made their appearance in several colonies, but the weather is quite cold, and brood rearing is almost suspended in the weak colonies. The bees are still actively at work on the meal, and this season it must have been of immense advantage. *Strong colonies*, send out bees for the meal, even during unfavorable weather, and protected as it is by the glass, they will work on it even during a considerable shower. As these heavy colonies are going right along, with brood in all stages all the time, it does really seem as though one *strong colony* would be worth a dozen weak ones. Some colonies are getting natural pollen to some extent, but the meal is the main dependence. Nothing but warm weather can save two more colonies; they have nice Queens from the imported stock and we dislike to unite them. We are making some careful experiments in feeding. Uncapping sealed combs, during a cold spell, we are inclined to think, will not do as well, as feeding them syrup. We find weak colonies without brood, or with but little, and looking starved, even with heavy sealed combs next to the cluster. If a brisk course of feeding, would fill all the cells around the brood, and make them show white bits of new comb just over the brood, we believe they would get along better; we are trying various ways of feeding, to secure this, and one colony we have given a tea-kettle feeder, full of syrup to be used at their leisure, to see if we cannot make them "get along." Of course we have packed the space all around it well with old clothing. See cover of Dec. No., Vol. 2.

May 10th—Humiliating as it is, we must confess it; we have lost one more colony. Our two weak ones swarmed out; we found the Queen of one, and put her back caged, and then gave them three combs full of brood bees and pollen from a strong colony, enough in fact to have made a good artificial swarm, and now they are all right. We then went for the other Queen, intently bent on providing for her in the same way; but after an hour's search, sat down with a long face, on top of a hive, and wasted some more time making good resolutions. The result was a determination that our 46 colonies, *must* go to work, and the way we have made them work "rain or shine" for the last few days, has been so satisfactory that we will give it. Put an empty hive without cover, in some sheltered place affording access to the bees; we use the old forcing house, but we presume an open window will do; if it allows the sun to shine in the hive all the better. Put in the hive six Universal feeders, and fill them to the brim with syrup or sweetened water, leaving the mouths all open; don't fear, the bees won't drown, and when they get really

in earnest,—so they will carry off a coffee-potful an hour for instance,—see if you too don't call it fun. This out door feeding seems just now, to start brood as we would have it, and *we* are determined that the 46 must work, until the blossoms call them away from artificial supplies. There will be honey to get before winter, *we* know, as Mrs. Rowell, says on page 13. The bees have been busy on the meal until to-day, but now they are once more so busy on the natural pollen. We forgot to say that our out-door feeding causes nothing like robbing at all; in fact they seem to take the syrup from these cloth bags precisely as they would honey from the blossoms, and the effect on the interior of the hive, is just what it should be.

We have just received a report of the Convention at Mich., through the kindness of Mr. Burch. The losses reported are strange indeed, and we cannot help wondering again whether it is really in the power of the bee-keeper to avert them. Mr. Bidwell and others, seem to have no trouble in *wintering* with the cold frames, but the bees will get "sick" in the spring; there is the great trouble. Mr. Bingham, if we get his ideas correctly, "doubled up" 150 stocks clear down to two, and yet they would die. Friend Nevins, of Cheviot, O., writes in regard to the freeze.

Unless you have a better show for bee pasturage than we have here, I think you will be fortunate if you lose two-thirds of your bees, to save the expense of sugar syrup to keep them the coming year.

Now are you not borrowing trouble friend N.? It is very true that our cherished plans, are at times dashed to the earth, but is it not equally true that a bountiful honey yield every little while comes upon us unexpectedly, and is it not a plain duty to be at all times prepared for either extreme? If we make up our minds to faithfully perform the duties of each day as they come up, without regard to what happens, we will soon be astonished to find how much cause we have to be thankful, and how many of our troubles, are after all, only imaginary ones.

ARTIFICIAL SWARMING.

MESSRS. A. I. ROOT & CO.:—In GLEANINGS for May, page 72, you say that it seems necessary to add to what has already been said on transferring bees. Now it seems to me you ought to add something to explain more fully your mode of making artificial swarms. I have read GLEANINGS from Alpha to Omega and do not find it quite plain. You say take a comb from several hives etc.; that is all very well but you don't tell us where you get your bees. Can you not tell us more about it in June No., and oblige at least one novice?

Bees wintered very badly in this section and the dwindling down is very discouraging. Hives that were reasonably strong in March, contain many of them, no more than a pint or a quart of bees. All box hives in this section.
C. E. POTTER.

Watkins, Schuyler Co., N. Y. May 10th, 1875.

We are well aware of the difficulty friend P., of making it all plain, because we are apt to forget that many of our readers may be unfamiliar with things, that we see in the Apiary so frequently, that it seems unnecessary to mention them. Now see if we do not make it clear. For instance, take the simplest mode of making an artificial colony, which consists only in lifting half the combs and bees out of their own hive and setting them into a new one. If the new hive has been previously located just where it is to stand, and you are using the metal corners, you can do this in *one*

minute, (you can by inserting a finger between each two combs, raise four all at once just as they hang in the hive) and with Italians, you can scarcely fail of getting a good colony every time, if the operation is performed in June. Now, you may ask, if this is all, why in the world are we given such long treatises on the subject? Well, simply because the above plan is in some respects a wasteful one. We did not tell you to look for the Queen, for she must be in one of the two hives, (queer isn't it?) and they would get along either way, providing always that you have a hive of bees to start with, that will cover 8 or 10 combs. We hardly need tell any of you, that it would be less wasteful, to allow the Queen to remain on the old stand, for they will get nearly all the flying bees, while the new colony will have no bees able to gather pollen etc., for nearly a week; meanwhile, they must get along as best they can in starting Queen cells, and taking care of the brood, with what pollen happens to be stored in their four combs. In fact they have little use for a Queen if they had one for as much as 5 or 6 days, and if you have by accident taken combs, all of which contain eggs and brood, they will very likely be unable to nurse them all, and as a result, the brood in the outside combs, and near the outside of the central ones will much of it perish. This difficulty is increased, on account of many of the bees going home. Now various processes, have been given, principally with a view of preventing this loss of brood; as in all operations, we should avoid killing a single bee, we should also avoid wasting a single egg or larva. If we should shake *all* the bees off the combs into the new hive, there would be too few to care for brood and eggs in the old hive, so it seems that we should avoid both extremes, and as it will require more bees to protect a given amount of brood when placed in two hives, than are required in one, if we are going to have *no* loss, we must go somewhere else for some bees. Hence our advice to make two or more hives, contribute to our artificial colony. Again if we take four combs out of a hive, what is to fill this vacancy? Our opinion is, that before attempting to increase your colonies you should have a supply of empty combs to be used in such emergencies. If you have none, you will have to set the old stock building some, at once, and have the young one help just as soon as their Queen begins to lay. And now comes in the Queen rearing business. This new colony may build a dozen Queen cells, and good Queen cells in June, we can hardly afford to waste; and now as you know pretty nearly what we want to do we think we can safely advise as follows:

Provide yourself with a nice clean frame of worker comb and put it in the middle of the colony containing your best Queen, imported if you can get one. Leave it there until the eggs in it have just begun to hatch; these are to provide us with *good* Queen cells. Lift the comb out gently, bees and all, (be sure not to get the Queen) and set it in a new hive, now go to your strongest stocks and gather up bees enough to build a nice lot of Queen cells. As we believe in doing every thing quietly, we will get them by taking one or two combs from a stock, bees and all, but carefully avoid

getting any comb containing any eggs or brood, or we might have an opposition lot of Queen cells. About 4 combs, if they are well covered with young bees will do.

In getting these combs, if you are using frames that have to be pried loose, you may frighten the bees so that they will leave the combs you wish to take; in that case set it back in the centre of the hive a few moments. About five combs covered with bees mostly young, will make a good colony for rearing Queen cells. If you want as many cells as you can get, cut long strips horizontally out of this comb containing the choice larvae, and insert them in the combs next it so as to be all on a level as nearly as may be, with an open space beneath each of the strips of larvae. Now you should on an average get 20 Queen cells, from a colony prepared in this way in the month of June, and we cannot afford after we have gone thus far, to have any of these cells torn down. Aside from the loss of the cells, we are losing the time of the colonies. Our plan for preventing the loss of cells we have given before, but it will bear repeating. If your larvae were very small, as we directed, none of these cells will hatch under 12 days, but about the tenth day, you are to count them, and then go to strong colonies, and get as many combs of brood having young bees just hatching out, as you have Queen cells. Into each one of these combs, insert a Queen cell and put them all in the hive where the cells were built. The bees that built the cells, of course will not tear them down, and by the twelfth day you will find all of them sound and secure, even if you have not inserted them all skilfully. If you found 20 cells, you must of course have a 20 comb hive; the Standard answers this purpose excellently, but we presume a double story hive will do about as well in very warm weather. If you took combs containing *hatching* bees for all these cells, you will have a rousing colony of young bees on the twelfth day, and you can now make colonies in short metre. Simply put one of the combs containing a cell, bees and all, into your new hive, and reinforce them with about two more combs of brood with all adhering bees, taken from any hive in the Apiary and the work is done. The bees on their own comb with their own cell will protect it, and the others being strangers in a strange house will soon join in. Colonies made in this way the last of June, last season, were strong enough before winter to assist in building up other stocks, and are now among our very best; all made from only *three* combs each of brood and bees. There is quite a saving in using a Lamp Nursery when we have a large number of cells, but we will speak of this next month.

If you have a Queenless colony, you can give them one of these frames containing a Queen cell, bees and all, and your Queen is introduced without trouble. We have never known such a cell destroyed. In making colonies later in the season, you will need to take more brood and bees; in fact you can make a large colony at once if you choose by taking say one comb each from 10 hives. Also, if the new colony has to build its own combs, they should have more bees and brood given them. Make all colonies help in comb building.

IS THERE A BEE DISEASE?

OR HOW WE ARE MADE TO SAY OUR CATECHISM.

OUR friend, J. Burtis, of Marietta, Onondaga Co., N. Y., don't believe there is any bee disease or dysentery, puts us on the witness stand, corners us up and lays all sorts of traps for our innocent and unsuspecting feet as follows: We always answer when any body asks us questions.

Is not cold weather or winter one cause of bees' dying?

We think it is.

If we had July weather steady for one year, would the bees die out as they do in cold weather?

Certainly not.

(We just begin to see where he is going to take us, but there is no help for it.)

Is there any such thing as a so called dysentery among bees?

Yes, when you feed 'em on cider.

If there is, what is the cause of said disease?

Cider, bad honey etc., and may be cold weather.

Some bee men make statements like this; the bees showed signs of dysentery or were affected. I ask what signs did they show of said dysentery or affection, and if affected, how or with what were they affected? When and where did this affection first show itself? and what were the causes of this great affection or disease?

Well they looked sick, and we guess they felt sick, at any rate they died; and the more we "took care of them," the more they died.

It is stated that bees are sick, and as I understand it, just ready to die with this dysentery or bee complaint and the very next thing before their articles are closed they state that they let them fly and they were all right and well.

Now I don't see nor understand how a bee just ready to die with such a dangerous disease at one moment, at the next can be all right and cured of such an epidemic.

Nor do we understand it either. If they could have July weather, we have no doubt, that it would make them all right and well; but that flying them in confinement, under glass etc., will answer the same purpose, we very much doubt.

I have been very much troubled with these bee diseases, yes, my head for years back has had all of these epidemics, very hard too; and since becoming convalescent a new inquiry comes. I would like to know first, what a bee is affected with; old age? starvation? or a hive with a pint of old bees in it?

We think a good many have been "affected," with "a hive with a pint in it," especially in April and May. The want of bees, is much like the want of money sometimes; it is all very well to say "get more," but how? If strong colonies in the fall, were always strong in the spring, the matter would be simple indeed. Dare we hope such may be the case?

Again; some of our old bee soldiers say that keeping bees too warm produces the so called disease, and that is so strange to a new beginner. I can't see into it. Bees are warmer in July, and no one is troubled then with disease.

We fear you are wrong there friend B., in our glass experiments, we had the tallest kind of disease when bees were confined in warm weather. Now we have it. It's *confinement*; and all the cold has to do with it, is that it keeps 'em shut up. A glass house might answer if we only had one a mile long and a mile high.

Can you tell me why bees now die in spring of old age, more than they did years ago?

Perhaps the very best thing we can do here is to sit right down and honestly say we don't know. It has been suggested that the

winters and springs are colder of late, but a very accurate old gentleman, told us yesterday, that such is certainly not the case. He says the coldest winter he has ever known was in 1816, and that accurate records, show that seasons now average just about as they used to; besides, bees die just about as badly in the Southern states as they do in Canada. See the following:

Oh! now I must acknowledge we *do* have bee cholera in the South. My bees went into winter quarters with unsealed fall honey, and rather weak. Jan. was the coldest month I ever saw in Texas. North wind nearly all the time. I had one Queen that I raised in Nov., don't think she ever became fertile. I gave her some brood (it was very scarce) but not enough to make a *fair* colony. Now I thought I would economize heat; so I kept her on top of the box where she was hatched with two cloths between the bees. About the last of Jan. I made an examination and found the bees all wet and "that old familiar smell" that I had never smelled before, greeted my nose most unpleasantly. I set the box off, and the wind blowing for several days, they were all dead when I examined again. Another colony, that I thought I could winter in a second story, perished, many of them with distended bodies. One other also perished. The honey candied (or granulated) and looked like lard. Did they not eat the watery portion of the honey and so become unhealthy? For they left the white dry sugar in the cells, and it is now being carried out every day, by the survivors.

M. S. KLUM, Sherman, Texas. Feb. 28th, 1875.

The dwindling down of the bees in spring is *not* dysentery, and whether it is in any way allied to the phenomena of soiling hives, combs etc., or not, we are unable to say. The *spring troubles*, we honestly believe, may be all obviated, by uniting weak colonies until they are strong; and perhaps the whole mischief could be brought under control, by uniting in the fall until our hives are full, and uniting again in the spring whenever it becomes advisable. By this course we should certainly decrease our number of stocks, but would it not be a more profitable way than to carry colonies almost, or quite through to May, and have them perish after having "boarded" them all winter? It is very likely that we haven't the necessary courage to sell good Queens in Sept., and put two good colonies together, but for all that, there are those who have, and if you wish to see what the result is of so doing, look over again, "How I obtained 8567 lbs., from 44 colonies," in April No.

Two postals just at hand illustrate well, this great obstacle to successful bee-keeping. The former suggests what is threatening, and the latter, gives the closing scene, and tells the fate of thousands of—dare we say—*weak* colonies?

Our bees are reduced lower than we ever had them at this season of the year, in fact so low that we despair of getting any profit from them this year. Cold winter weather all the while. We can winter bees but we are not a match for such springs as the last three have been.

G. M. DOOLITTLE, Borodino, N. Y. May 3rd, '75.

I have a Queen that is left of a swarm that has dwindled down to nothing but the Queen. I have kept her in the house for the last 3 weeks waiting for warmer weather. But it still remains cold. Now if any body wants her for \$3.00 they can have her.

L. N. SNEYD, South Stockton, N. Y. May 4th, '75.

And still another.

Please don't send me more than one Italian Queen, until you hear from me again. I have lost 12 colonies out of 13, but shall buy some more if I can.

JAMES MATTON, Atwater, O. May 5th, 1875.

We presume more than one of our readers, are having Queens to sell just when they expected to want to buy.

[For Gleanings.]

ABOUT THE RAIL ROAD APIARY.

BY P. W. McFATRIDGE.

FRIEND NOVICE:—"That dwindling down in our own Apiary" has been given to the past. How did we do it? I will tell you. It was that Rail Road that did it. You see about the 24th of March when those "zero freezes" were killing your unsealed larvae we had just simply to run our whole APIARY into the house where the temperature was from 45 to 50°. No killing larvae there. No sh-c-c, and it was all done in 20 minutes. No lugging hives either. Well, soon as it was warm enough we run 'em out again, and when the great freeze came on Thursday night April 15th, 1875, I awoke about 3 o'clock A. M. Friday morning the 16th, and looking out of the window saw the snow on the Apiary. It didn't take me long to *holler* out "*Boys* get up and let us put the bees in the house," and in less than half an hour our whole Apiary was snugly in a warm room we had then 80 colonies, many had been weakened down during the winter and we had, before this, united them into 80; there were when first set out, 113 colonies. We kept them in the room until Monday morning, about 9 o'clock A. M., when we run them out again and they never "*knowed*" that there had been an awful freeze. But they were most awful thirsty. Why what do you think? They took away 22 gallons of sweetened water before the sun went down that day. The water was the washings of our honey barrels and the *scraps* of honey laid aside the previous summer, was perhaps as sweet as four gallons of sugar water boiled into one. A large portion of our colonies have to-day sealed brood in 8 combs, and we have been obliged to give them combs in the upper story, to prevent preparation for swarming.

Yes, our Rail Road system has cost us some money, but we have better control of our Apiary than ever before, with a great deal less labor. The whole R. R. apparatus cost us about \$100.00 and by adding \$10.00 more (two cars) will accommodate 160 colonies of bees. This includes only the R. R. attachment. You say in April No. GLEANINGS in alluding to our machinery "It would be rather expensive." Don't you think that your 50 colonies would have been to-day, worth \$2.00 each, more than they are if they could have been in a warm room during those two cold spells? If so, then your R. R. would have paid you all expenses first pop. And I think you would certainly have had them in the house if you could have put them there without "lugging."

I was at J. S. Hill's Apiary (12 miles north of Cincinnati) a few days ago, and think I never saw an Apiary in better order. Everything in the nicest trim. Eighty colonies, 5 Queens, 3 or 4 having brood in 2 or 3 combs, and the balance in fair condition. Wintered on summer stands with quilts on and chaff in upper story so arranged that it can be taken off at any time without disturbing the chaff. I like the plan of quilt and chaff so well that we will adopt it next spring in connection with our R. R. system, after the bees are run out of the house. Friend Hill and I were wondering what Novice's next hobby would be. I told him I thought out-door wintering. You have tried a good many devices but don't go back to out-door wintering yet, try a R. R. once.

Bee City, May 10th, 1875.

We fully appreciate your idea friend M., but still think the same thing may be accomplished easier. For instance, your hives on the cars are not in a convenient shape for extracting, and we should fear they were too close together for either Queens or workers during the season. "Our next hobby" would be something to give the bees just the protection you mention, and yet leave them on their summer stands, grape vines and all. An Apiary of 80 colonies if arranged hexagonally need not cover so much ground but that a roof might be so arranged on wheels as to be run over the entire enclosure, even easier than you run out your hives; this would leave the hives undisturbed, and in fact should *our* stocks *now* (May 17th) be wheeled in and out on cars, we fear some of them would "bile out," just a little. We really feel as if we would like to let our bees remain in quietness the rest of their lives

where they stand, and if any protection be given them, it is to be quietly pushed over them. The walls of this enclosure can be made double, and filled with sawdust; and for that matter the north roof might also, as all we want in the working season is all of the sun-shine and plenty of air, without high winds. To avoid moving this heavy roof, perhaps we can make use of friend Kern's curtains. At present, we believe such an enclosure to keep off the severe frosts in the spring, would be just as well, or better, without any windows, and keeping the bees in darkness as near as maybe when it is not warm enough for them to fly out of doors, we believe would be for their benefit. If all cold winds were kept off, the bees would work on meal inside such a building, when they would not outside, as we have proved by experiment, but we doubt the policy of ever letting them know they are "shut up" and when ever they are flying, they should be allowed to go out if they wish, that is, no glass should restrain them, and we much doubt the policy of commencing to stimulate before April. There are many difficulties in the way, such as depriving them of all the benefit of a covering of snow in winter etc., but we do hope those who feel interested, will make some careful experiments. Patent right men are already claiming they have made it a success, and are offering to sell townships and counties, *but don't you believe a word they say.* We will take all pains to keep our readers fully posted in regard to any real improvement.

[For Gleanings.]

THE EGYPTIAN BEES IN THEIR NATIVE LAND.

FURNISHED BY J. H. PIERCE, DAYTON, O.

FROM Swineforth's "Heart of Africa" I condense the following "first-rate" notice of the Egyptian Bee as observed by him on his voyage up the Nile. "As our towing rope was being drawn along through the grass on the banks, it disturbed a colony of bees. In a moment like a great cloud they burst upon the men who were rowing; they all plunged into the water and sought to regain the boat. The bees followed them and in a few seconds filled every nook and cranny of the deck. I was arranging my plants in my cabin, and called out to know the cause of the noise and confusion, but got only excited gestures, with the cry of 'Bees! Bees!' I tried in vain to light my pipe. In an instant thousands of bees are about me, and I am mercilessly stung, all over my face and hands. Vainly I try to protect my face with my handkerchief, and the more violent my motions, the greater the fury of the bees. The maddening pain is now in my cheek, now in my eye, now in my head. The dogs under my bed are frantic and burst out overturning every thing in their way. Losing well nigh all control, I fling myself in despair into the river; I dive, but all in vain, for the stings still rain down upon my head. I creep through the reedy grass to the swampy banks, and with lacerated hands try to gain the mainland to find shelter in the woods, but am dragged back by my servants with such force that I am nearly choked in the mud. Again on board, I drag a sheet from my chest, which affords me some protection, while I gradually crush the bees enclosed within the sheet. By great courage on the part of my people, my large dog was brought on board and covered with cloths, a smaller one was never recovered, stung to death no doubt, by the bees. Cowering down under my sheet, I lingered out full three hours, whilst the buzzing continued uninterruptedly, and solitary stings penetrated periodically through the linen. Every one became equally passive with myself, perfect silence reigned on board, and the bees subsided. Some of the crew then crept stealthily to the bank, and fired the reeds. The smoke scared away the bees, and the boat was drawn to the other bank.

With the aid of a looking glass and pincers I extracted the stings from my hands and face, but could

not reach those under my hair, these produced ulcers which for two days were very painful. I felt ready that evening for an encounter with half a score of buffaloes, or a brace of lions, rather than have anything more to do with bees! Several of our party suffered from violent fever. Of sixteen boats which followed us all were pestered by these bees, and two persons were stung to death."

Mr. Langstroth adds as follows:

Does any one want such bees? There are two passages in the Bible in which the anger of bees is spoken of—Moses, in Numbers, says, "Your enemies chased you as bees do."—Such a comparison would hardly have been suggested by any experience with our common bees. It was this very species, *Apis Fasciata*, that inhabited the Holy Land—and to his hearers who were so well acquainted with its terrible ferocity, and persistency of attack, he could have used no comparison more forcible.

"They compassed me about like bees," says the Psalmist, and we know now the power of the comparison. The sacred writers were speaking of this very bee—and we have here another incidental confirmation of the fact, they were speaking out of a true experience.

L. L. L.

Notwithstanding the above it is our opinion that we have more than one reader, who could have taken that very colony and have made them "humbly apologise." If you doubt it, get the boys to show you "maddest nest" of Bumble bees—you all remember such in your childhood—and see how they will now respect "superior intelligence." We have made one trial with "Yellow jackets" in the above line but somehow they failed to pay due respect, or to have any proper sense of propriety of the thing, as Bumble bees do.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, JUNE 1, 1875.

BUT I say unto you, Love your enemies, bless them that curse you, do good to them that hate you, and pray for them that despitefully use you, and persecute you. Mat. V. 44.

QUINBY'S Smoker by mail, \$1.60. Express \$1.50. We keep 'em.

A QUARTER of a million of the metal corners are now in use.

A. B. J., on hand on the 11th, and Magazine and World on the 15th.

In writing to our Advertisers, will you please say that you saw their notice in GLEANINGS?

Magazine is at present edited by Albert J. King, brother to H. A. King, if we are correctly informed.

WHEN you order an Extractor or gearing, please do give the length and depth of the frame, or frames, you are going to use in it.

Mr. ELWOOD informs us that he by mistake stated that his "tall" Queen came from Benedict. What he intended to say was that her mother came from Mr. B.

so long as we cannot mould the weather to suit our

wishes, had we not better look about us and see how best we can mould our wishes to suit the weather.

MANY excellent communications, are only left out for want of room. It really gives us pain to be obliged to omit so much that has evidently been prepared for print, with so much care.

DURING the absence of Miss A., (the "school ma'am" of our establishment) who is spending the summer with a sister in Minnesota, please be lenient with us if we do now and then frame a sentence "backwards," etc. You know we mean well.

If a Queen is capable of supplying eggs for 6 or 8 combs, and we confine her to 2 or 3, by giving her an insufficient supply of bees, are we not defeating ourselves? If such is the case had we better not delay increase of stocks, until our hives are all full.

WE should consider a manufacturer, who neglected to protect himself by patenting the wares of his own invention, almost as imprudent as he who neglects to keep his property insured. If what we have said in regard to patents has given an impression to the contrary, we have certainly been misunderstood.

WE have seen the bee louse mentioned by Mr. Elwood last month, in our own Apiary, but it was in a very weak colony. We feel satisfied, that like the moth miller, and most other enemies, it would find no berth in strong colonies. We noticed it over a year ago (during the manure experiment) but have been able to find none since.

MANY of our friends are making out nice clubs. T. G. McGaw, of Monmouth, Ills., has just sent his 15th name. Albert Potter, of Eureka, Wis., has also sent quite a club as has several others, but our friend Doolittle is still ahead of all, having sent directly and indirectly 35. Remember you can retain 25c. on each after you get up to 10. Volumes 1 and 2 count all the same.

As an apology for not giving personal answers to all inquiries sent us, we may remark that our right hand is again protesting—those who complain they can't read our "postals" will please be lenient. No one can be hired to do this work, and our only resource is the printing press. Very many of these questions are fully answered in back volumes—oftentimes in the price lists which we always furnish gratuitously.

THOSE who recommend no uniformity in dimensions of frames should listen to our plaintive tale. A neighbor had one L. hive—all the rest Americans. Didn't extract any from L. hive, cause had Am. extractor. L. hive very heavy—weighed 80 lbs. In fall—we had all L. hives, so gave him \$15.00 for it and "all was lovely." Bees got dysentery—ate nearly all the 80 lbs. honey, and then were "not happy." In April they got the "dwindling"—tried to unite 'em to another weak colony, but when it was almost done found these L. frames were about one inch deeper, and one inch longer. Bees died—result is, all that we have left for our \$15.00, is a hive that we have got to hire a man to make into kindling wood, and ten combs that must be transferred into frames that will go into our hives. Even American frames, called 12x12, vary from 11½ to 12½. Shall we make no effort at all to go in a few beaten paths in the future?

MULTUM IN PARVO—May 25th—Suspended hive shows a gain of 1½ lb. honey per day—Medley will be out next week—Dean will ship Queens about July 1st, price by mail \$1.10, none sent by express—Mr. Peabody says in A. B. J., that we approve his Extractor, which was very naughty in him, knowing as he did, that we do not—Mitchell has been very naughty too, in accusing us of so many things in his May Directory, that we didn't do—says now he is going to pay all he owes. Mr. M. we'll help you all we possibly can if you only will do this and stop getting more money by telling such wicked stories—We have just extracted 10 lbs. of honey from Standard hive, from fruit and dandelion blossoms. Now there are but few blossoms, and the Queen is not even an average one (see page 123, Vol. 2.) but she has had bees enough to take care of every single egg laid during the past 6 months; there is the secret, for we believe every egg has produced a bee—We are now doing so much of a business with

Extractors, that we have been enabled to add some improvements that come very near making them ornamental as well as useful. We trust they will speak for themselves, in every neighborhood where introduced.

TIME OF SOWING RAPE.

FROM Rape Culture by Kruschke Bro's., Berlin, Wis., we extract the following:

The time for sowing ranges from about the 20th of June to the 1st of July in this latitude and climate. Further south it might be sown earlier or even later. The object here is to protect it from an insect, the so-called "spring tail" or ground flea—its only insect enemy here—which sometimes makes sad havoc when the plants are young. But they have generally disappeared before the seed comes up, if sown within the above given dates. Where this insect does not exist it may profitably be sown earlier, or later where the summers are longer.

The soil should be well harrowed, or cultivated before sowing. Three pounds of seed are sufficient to the acre, it is sown broad cast like turnip seed.

It is also very beneficial to put on about 50 pounds of land plaster per acre, at the time of sowing, or when the second leaf is opening. The farmers in Calumet County always use plaster, no matter how rich the soil may be, and are satisfied that it pays them well.

After harrowing it under it is a good plan to roll it, as the hot sun at this time of the year dries the soil very quickly.

Its time of coming up depends entirely on the weather; if it has a good shower of rain immediately after sowing, it will be up in a few days, but if the weather is not favorable, it will take longer. Sometimes there are even entire failures, the same as with other crops, for this is but natural.

THE AUTOMATIC HIVER, PATENTS, ETC.

BY, L. L. LANGSTROTH.

FRIEND ROOT:—I date this from the Apiary of my old friend Wm. W. Cary, who was the first person in this country to breed Italian Queens on a large scale. From the Apiary of Mr. S. B. Parsons, at Flushing, L. I., who was the first large importer of these bees, Mr. C. sent Queens to many persons in 1860, and put up for California, 113 in the fall, which all arrived safely. This is very unlike the results obtained in our European importations. What makes the difference? Mr. Cary is well situated for breeding pure Italian Queens, having no black bees near enough to trouble him. Such Queens as he furnishes for \$2.00, are very desirable.

I find the buds of the apple trees here not as forward as they were in Oxford, O., were then five weeks ago.

Now for the best methods to make the new swarms alight on Jones' Automatic Hiver. Mullein stalks or an old black Kossuth hat should be placed at the end of the Hiver, and very great pains should be taken to secure the alighting of the first swarm upon it—after which the successive swarms will cluster upon it almost as a matter of course. If a Queen cage with a fertile Queen, which can be best spared, is fastened to the clustering spot, the bees will be more readily attracted to it. If the Queen of the issuing swarm is caged and when the bees miss her, and begin to return to the parent stock is presented to them, they may be easily attracted to the Hiver, which may be lowered to a convenient height, and raised when they begin to cluster on it. In a large Apiary where there is constant supervision during the swarming season, I should prefer even with the swarmer to have the wings of the Queens clipped to prevent swarms from going together and killing one or more of the Queens. If the hiving box contains a nucleus with brood and a caged Queen, the bees will not forsake it even if their own Queens should not be given them.

While I hope much from the Automatic Hiver for large and skillful bee-keepers, I see little in it for small and careless ones. If it were patented and territorial rights sold, however careful the patentee might be, in his statements, he could not control the purchasers who would honestly exaggerate its importance—still less, those who would lie greedily for "filthy lucre." Such persons would try to persuade the unwary, that this was all that they needed to make bee-keeping a success—

"Buy it! buy it! the last new patent—try it—try it!"

I have little doubt that some would be induced to purchase by being made to believe that the swarms of

their neighbors would be attracted to it—just as patents were sold with fixtures for catching wild bees—careful directions being given how not to entrap other person's bees—but with small desire I fear, of inculcating "how not to do it."

Now a few words about patenting devices which, however valuable, can be easily made, and without a large investment in machinery etc. Such patents will be largely infringed upon—and the patentee will usually find himself substantially without any redress. The patent laws do not, and cannot protect him. He may commence legal proceedings in the United States Courts against infringers. But few have the means to do this, even if it would pay them to hunt up and prosecute small infringers. The patent is like a good pasture, with weak walls or fences, and hungry cattle all around it—sure in due time to be trampled down and eaten up. If a patent is upon something which requires much skill, and considerable capital for its manufacture, it is far less likely to be infringed. Men are not apt to invest largely without careful inquiry as to the rights of others—they have too much at stake and by their large investments can be too easily reached for damages.

Hoping that these remarks may be of service, I reserve further discussion of this subject to another occasion.

L. L. LANGSTROTH.

Colerain, Mass., May 19th, '73.

Humbugs and Swindles Pertaining to Bee Culture.

(We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.)

R F. YOUNG & CO., 29 Broadway, N. Y., if any such firm exists in reality, have left Flick, White, and all the rest of them far in the back ground, in the Ambrosial honey business. It is a curious fact that these fellows invariably exhibit such a destitution of brains that they can never originate anything, of themselves, but persist in copying the same lingo over and over about employing "expert chemists" "slippery elm" etc., etc. This Dr. Young (who may be the original thief of the lot) devotes over 7 pages to the honey business, We clip as follows:

I am at liberty to mention here that one of the ingredients I use is the powdered bark of the slippery elm, a small quantity of which will bring up a pint full of warm water to the rich, creamy, substantial consistency of Honey.

Imagine your mouth full of the sweetened and flavored "creamy" mixture. Healthy no doubt.

In five hours you can make, by this process, more pure and delicious Honey than all the bee-raisers in the United States can gather and prepare for sale in as many years!

Now isn't that rather heavy? How very small we do feel.

For six dollars—a very moderate investment, and one made without the slightest risk, and without any labor worth thinking of—you get twenty-five dollars, and so on, in proportion to the capital you employ.

For mercy's sake can't some body give us a pencil that we may "reckon up" how rich we may all be by next 4th of July.

It looks like amber—[brown sugar probably—Ed.] clear, fresh (another advantage over the crude, fermenting product of the hive), and tempting as Olympian Ambrosia! It will take the place of preserves wherever it may be introduced.

Very likely Mr. Y., we are unacquainted with the Olympian kind at our house and you may be right, but we do wonder that people will send money in response to such awful falsehoods. We fear they do if we are to believe that your catalogue at hand is the 72nd edition, as you say.

HONEY COLUMN.

DEAR EDITORS:—Extracted honey taken out before it was capped over, has injured the sale of a good article, *all* extracted honey has injured the reputation of comb honey, and artificial honey has nearly killed both. Therefore I shall use my extra sets of combs for new colonies of bees, thus doubling my number of stocks and raise comb in 4 lb. boxes exclusively.

JAMES HEDDON, Dowagiac, Mich., May 13th, '75.

There you go friend H., but we have seen so many that had determined on "comb honey," change their minds about the time the bees had got every thing full and wouldn't "move in" to the nice surplus receptacles, that we have little fear that you will not do the same. Our neighbors who have once had experience as to what can be done with the extractor are very much disinclined to allow their bees to hang out and idle away their time in the old fashioned way. Do you mean to intimate the price and demand for *good* butter is ever spoiled because poor is to be found in the markets? By the way which is most plentiful poor butter or poor honey? Again has the spurious butter that has of late made its appearance, in any manner injured the sale of a nice article? Are not our bee-keepers borrowing trouble? Who is it that determines which is the good, and which is the bad butter? Why the people who eat it of course. Even our 2½ year old Blue Eyes will tell you in a twinkling which is the good "butter," as she calls it. Our friends don't know honey yet; but bless you! they will very soon learn to tell what kind they don't want.

We would ask those who complain that they can't sell good honey, if they have left it for sale at every store and grocery for 10 miles around? When people get accustomed to thinking that honey is always to be had at the same price as butter or less, there certainly will be no trouble in selling all that can be raised. Again if you really are obliged to sell it for 10 cts. per lb., and run a risk of getting your pay at that, *do* give your neighbors a chance at it at the same price.

DEAR NOVICE:—I have in the hands of W. G. Smith, of St. Louis, about 600 lbs. of nice fall honey gathered principally from Spanish Needle and Golden rod, and put up in waxed casks of 10 and 20 gallons each. He says there is no sale for honey now in St. Louis, and can't sell it. If you can assist me in disposing of it at 12½ cts. per lb. on board cars at St. Louis, I will recompense you for all trouble. Sample sent if desired.

M. E. McMASTER, Shelbyville, Mo.

P. S.—Address either myself or W. G. SMITH, 419 North Main Street, St. Louis, Mo.

We have a sample of the Spanish Needle honey sent us by some kind friend, we can't tell who now, and we like it very much, even better than clover honey for a change. It is dark but very thick.

My merchant in New Orleans writes me he is selling this spring some splendid honey put up in very attractive fancy jars in New York (that is he bought it in New York City) and that it sells very readily. I suppose it must be strips of nice comb put in and then filled with liquid honey. He doubts if anything as attractive can be put up South. What kind of jars can they be? Is there any thing better than "Mason's Improved" self-sealing round glass jars for putting up honey and if so where can I get it? Wm. H. WARE.

Bayou Goula, La. May 11th, '75.

Our friend Muth sells a very attractive jar; he sent us some samples which we filled, but they were gone so soon, we hardly had time to see what they were like, see his advertisement.

We have preferred the Mason jar, because every one finds them useful in the household. We don't know of any other self-sealing jar any better.

SWARMING TIME.

EDITORS GLEANINGS:—The time will soon be here when those who allow their bees to swarm naturally can look for swarms. And my advice is to those to have cool and clean hives for them, then there is not much danger that they will leave and go to the woods. Some bee-keepers make such a big noise when their bees swarm that I would not feel surprised if all their swarms would leave. I once came to a neighbor when one of his did swarm, I thought at first they would all go crazy, the wife had a large hand bell, the man had an old fashioned dinner horn, one of the boys had an old scythe, and one had a strap of sleigh bells, one of the girls had a tin pan, and they made a noise that could have been heard two miles off at least. The bees got settled on a small peach tree, the man placed a hive under them and at the same time he had a watering pot ready, then he shook the bees down and did sprinkle about ten quarts of water over them, and the next thing I heard of that swarm, was that it left for parts unknown in the afternoon. I know one man that lost one-fourth of all his young swarms every year; they go to the woods or fly to an empty hive somewhere in the neighborhood, and I think I know the reason why they go; his hives are half rotten, one hangs forward, the other backwards, some this way, and some the other way, they stand in the shade under some scrubby trees, and it rains, snows and blows right on the hives the whole year round, so I think it is no wonder that the young swarms leave. I think it is with bees as with a man that lives in the country or city and has got a house that is good for nothing. I think he will not stay if he can get a better one, but if a man has got a splendid house with a nice yard to it he doesn't like to move away, so it is with bees. If they have got good hives and a watchful keeper to live them as soon as they have settled, there is not much danger that they will leave. I never had a swarm that left. In the summer of 1873 I had a strong colony that would not swarm. The bees were hanging out as big as a small bucket. I came to the conclusion to smoke them in; I did smoke them till every bee was in, and in about two hours they did swarm. In the summer of 1874 I tried the same thing again, and they did swarm about one hour after I did smoke them, and the swarms did turn out just as good as any other natural swarm that I had.

D. N. KERN.

Shimersville, Lehigh Co., Pa. May 3rd, 1875.

We should never think of hiving any swarm of bees without giving them a comb of unsealed larvæ. It seems that bee-nature is unable to withstand the temptation of unsealed brood that needs care. In regard to making bees swarm by "smoking them in," we can hardly think such good news can be true invariably, from what we know of the insects, however it is very easily tried, and if true will give friend Kern a place among our benefactors by no means to be despised. If we have among our readers a person who allows his bees to hang out, idly, we must think we have done our part badly. Mr. Langstroth thinks, that noises by drowning the note of the Queen, *may* cause a swarm to alight.

J. P. MOORE, of Binghamton, N. Y., sends a description of what he calls the "Boss Feeder." It is on the atmospheric plan, and is simply a tumbler or glass jar of syrup inverted on a piece of *painted* wire cloth. To hold the wire cloth level it is tacked to a small frame, and by setting this frame in the portico, and making an opening to match the entrance to the hive, they can be fed without opening the hive. When the feeder is to be replenished, fill it full, and hold a piece of tin over the mouth until it is in place on the wire cloth. To make the feed come down more rapidly, make a hole in the centre of the wire cloth, nearly the size of a bee.

Heads of Grain, FROM DIFFERENT FIELDS.

I HAVE frames with comb in them somewhat soiled by bees voiding their feces on them, (the bees died) if the combs were empty I would wash them but most of them contain some honey and I have no extractor. Do you think, or do you know from experience that it would hurt bees to put these frames in their hives?
JOHN DAWSON.

Pontiac, Oakland Co., Mich. April 28th, 1875.

We know from experience that it will not hurt a strong colony of Italians to give them one of these combs at a time, in the centre of the hive. We have used combs thus that were so mouldy as to be offensive to the smell, have used combs that seemed hopelessly infested with moth worms, yet in every case our faithful little friends did a job of cleaning and cleansing, in a few hours, that might well excite the envy and admiration of every good housewife. In some cases where the comb is badly infested with webs, our engineering friends decided on cutting down and dragging out a considerable portion of the comb, and woe betide the unfortunate worm who imagined he had only black bees to deal with. For this purpose you need a strong colony, in the working season, and after once seeing the rapidity with which young Italians do this work, we think you will never afterward think of fussing with combs yourself, in trying to clean them.

Our bees, 77 colonies have all wintered well and bid fair to do well. The nucleus hives will be ready for basswood honey. I can winter small colonies without loss, but in future will let such as choose winter their small colonies; for me they are not profitable. Our bees were wintered in a house; temperature 37 to 48°, average about 42. They had both upper and lower ventilation. They were too warm in December at 46 to 48°, and were quite restless until the temperature was reduced. They were housed the 24th of November, and placed on their summer stands the 24th of February. Had straw mats on each hive and find them excellent.
E. C. LARCH.

Ashland, Boone Co., Mo. April 24th, 1875.

Cold winter weather. Mercury for the last three mornings has been 8, 17, 10°, which is not very favorable for rapidly decreasing colonies. My bees are weaker than ever before at this season of the year. Have but 86 with prospect of losing 11 more at least.

G. M. DOOLITTLE, Borodino, N. Y. April 20th, 1875.

Fed some cotton seed meal in Feb., as an experiment. Bees seemed to like it as well as the rye meal. March 20th, commenced cutting out Queen cells. April 8th, the first swarm.—unusually early—14th, another swarm, 15th, put on supers, 17th, bees at work in some of the supers, and everything going on finely up to this writing (26th). I went into winter quarters with 23 hives on 17th Nov. last, with plenty of stores and strong stocks. I wintered some on summer stand, some I gave additional quilts, some "upward ventilation" and some no ventilation, and yet they all came through in splendid condition. One stock is in a glass hive—bottom only being wood. At one time I saw a cake of ice nearly filling the entrance to this hive—the condensed moisture from within—and though we had one spell of six weeks cold, during which bees did not fly at all, yet they came through all right.
W. H. P. JONES, Nashville, Tenn.

An excellent moral conveyed. Are any of us free from a disposition, to think we have made some grand discovery, if by chance some pet project happens to apparently succeed? Friend J. tries all sorts of plans, and they all answer equally well. Mr. Langstroth tells us that the best colony he ever had in the spring, was wintered without quilt, honey-board or any thing; an empty upper story kept off the rain and that was all. Now we would not in-

fer from this, that such a course would be best for all colonies, but rather that *very strong colonies* would suffer no injury from such very abundant upward ventilation.

I put 20 colonies into winter quarters. Lost 2 in Jan., one in cellar and one on summer stand; the rest came through till first of April, as I thought, in good condition. Half were wintered in cellar, the others on summer stand. Since then they have had the "dwindling down" as it is called, and in that way lost 6 more, some of those that were wintered in cellar, as well as those wintered on summer stands. Some of the 12 that I have yet, contain only the Queen and a few bees, what can I do with them? I have heard of making a mound of spent tanbark, taking off bottom board, setting colony on, and covering with same from middle of Nov. to middle of April. Cover two feet thick. Shall try it next winter.

J. I. SNYDER, North Lima, O.

Those that contain too few bees to build up of themselves, had better be treated as you would a surplus Queen; give them two or three frames of hatching brood at once—enough to make a swarm in fact—from other stocks that can spare it. If you waste your time in giving them one comb of brood at a time, they will probably let it all die, and finally die themselves. Such experiments as you mention, with sawdust and tan bark, may do as well as a good cellar, but are a deal more trouble, besides the liability of getting damp and mouldy.

Have increased from 5 to 14 swarms this spring, all natural save one. One hive has swarmed five times to date. Vol. 1st is a great treat to a beginner like myself.
J. H. McDOWELL.

Red Fork, Desha Co., Ark. May 1st, '75.

I have lost, winter and spring, 30 swarms, and still they are dying. I have had 4 leave their hives and young brood. I can't account for it.

LYMAN LEGG, Rose, N. Y. May 3rd, '75.

All cases of desertion of the hive in spring, that have come under our notice, have been weak colonies; good strong ones, never do it.

I blistered my hands yesterday digging up the grass from around my hives. I thought you were joking when you said the bees tried to pull up grass from their door-ways, but think now they always do it when the place is tolerably clean and only a few sprigs show themselves.
MISS ANNA SAUNDERS.

Woodville, Miss. Feb. 3rd, 1875.

We agree with you Miss Anna, and we do believe that bees take pride in, and enjoy having a neat pretty home, about as much as any other piece of animated nature. The colonies that "clean up" their door yards, and try to pull up the grass etc., about their hives, we find are invariably profitable honey gatherers, and in fact they never commence picking up around out-doors, until they have become strong and populous; then they begin to feel themselves energetic and independent. Robbers, worms, ants, flies, and grass that attempt to obstruct their door-ways, are given to understand that this is "their house," and that they mean to take care of it too. We are just now beginning to think that even the bee disease and the "spring dwindling," would have to seek other quarters too, if we would allow them the population that their nature and instinct demand. Who can say that bees too have never felt the charm conveyed in that simple phrase, *our own home*? Have we any among us, that have ever felt the meaning of the words, "I have no home?" May God bless our homes, all of them, and may he help us to deal gently, with all his creatures, who may be directly or indirectly, dependent on us for their homes.

DEAR NOVICE:—I have at present about 100 hives and intend to divide them soon. We had here, about 10 days ago, a very severe frost which did great damage to bee-feed, killing the sage and nipping the sycamore, walnut, and young orange trees in some localities to a considerable extent. The frost does not seem to have done great damage on my place, which is in the mouth of a canon (mountain gorge) but stopped the honey yield for some days, and the bees killed off many of the drones, and robbed a nucleus. I think however, that the bees will do to divide within a week, particularly as the sage at my place is just coming into bloom, and as long as it lasts the bees gather a great amount of honey.

The Bee-Keeper's Association of Los Angeles Co., of which I have the honor of being Secretary, numbers some 35 members. We have meetings every second month, and during winter generally every month. We are trying to do our best work for ourselves and for our customers, but have lately been greatly annoyed by being accused of sending adulterated honey East. As honey is cheaper here than anything with which we could adulterate it (except water), any body acquainted with the country and business here would know how utterly groundless such an accusation must be.

I suppose there is no help for that honey candying. We ship nice liquid honey, and almost invariably are informed after some time, that the honey is candied and won't sell except at a low price. I have here, extracted honey put up at the same time, in same manner and drawn from the same bulk in honey tank, as what I shipped last September to San Francisco, and which was shipped East from there. My honey here is a perfect liquid; not the least sign of candying, while according to the commission man the lot he received was candied long ago, and some of it sold as low as 7 cts. Four years ago I got 15 cts. for the first lot of honey I shipped in the spring. It was strained in the sun and rather dark. It might have been the first lot of new honey in the market that year. Now, every body is rushing into the business, and there is more honey, than people care to see. It takes half a year to sell it, and at such figures!

Shall run a number of my hives for box honey this year. There seems to be better demand for that, although it requires more trouble and expense in shipping. Yours respectfully, Wm. MUTH-RASMUSSEN.
Los Angeles, Cal. April 29th, 1875.

The winter here has been very hard on bees wintered out of doors, also on bees in houses not frost proof, as it has been so cold. The temperature fell to 22° above in my house, twice when the wind was blowing a gale and 20° below zero; but with the aid of red hot iron weighing about 20 lbs., I soon raised the temperature above freezing. My bees are the quietest at about 35°, when above or below that they get restless. I have 90 colonies in house, 16x18 outside, 14x16 inside, 12 inches space filled with sawdust well tramped down as put in building all above ground.

R. R. MURPHY, Fulton, Ills. March 2nd, 1875.

I have contrived an arrangement for hiving bees, when high up on a limb of a tree or in some other place inconvenient to get at. It is a sack about 1 yd. across the mouth, with 4 strips wood jointed together and attached to a pole. The sack is tacked to the 4 strips, which close the mouth by means of a string. Long or short handles can be screwed on according to the height of the swarm. I then run the sack up under the swarm, give the limb a punch with the pole, (which extends a few inches above the mouth of the sack) the bees fall into the sack, I pull the string which closes the sack and the bees are securely bagged and can be conveniently taken where I choose.

M. PARSE, Pine Bluff, Ark.

DEAR MR. EDITOR:—As I stated in my last report, we (my sister and I) wintered 25 colonies of bees. The place we wintered them in was a root-house, built new last fall and perhaps not dried out as it should have been. Owing to this and the long and severe cold winter we lost three. We gave our bees a fly about a month ago, put them back into their winter quarters, and as the weather remained so very cold left them there until April 26th. After they had been out only one half day they began to bring pollen and even some honey, and since then, they have been prevented from working only a few days, which were May 1st and 2nd, through a little snow-storm. We have examined our stocks and were well pleased to find them in so good condition. We are not obliged to feed our bees, for we left them well supplied in fall, so well that we believe they will not need all they have. We do not believe in taking away too much honey in fall and feeding them with melted sugar in

spring, far rather let the dear little creatures rejoice over the products of their own toil, which we believe the healthiest for them.

That this season may be a successful one to all our bee-keepers is the hearty and sincere wish of

MRS. H. GIESELER, nee KATIE GRIMM.
MRS. C. KUSTERMAN, nee MAGGIE GRIMM.
Green Bay, Wis. May 6th, 1875.

Many thanks for your kind wishes dear friends, and we are very glad to hear that the honey in your locality is wholesome for the bees during winter and spring, for we have strong proof that such is not the case in all localities. Within a few miles of us is a large swamp, that yields large quantities of late fall honey, from the Spanish needle, (*Bidens Bipinnata*) this honey is dark, thick and of peculiar flavor, but bees have so invariably died in that locality, when their stores for winter were from this source, that it seems plain to us, the honey is unwholesome for *winter food*. It is true of course that we may be mistaken in the cause, but when colonies side by side with them are healthy when given sugar syrup—we do not melt the sugar, pouring hot or even cold water on it and stirring it up answers every purpose for feed to be used during warm weather—we cannot do other than recommend it. Remember that the white sugar of commerce is sugar almost chemically pure, in a state of purity indeed that it would be impossible to attain at so small a price per pound, were it not for the immense scale on which the refineries are conducted to supply the demand of a great nation of people. The brown sugar may be adulterated, but the white coffee sugar presents peculiar difficulties that render it well nigh impossible. Therefore, if we would be sure that *food* has nothing to do with great mortality among the bees in different localities, should we not give them that food in absolute purity? It is of course now well known, that bees will gather any thing that is sweet, the juices from decaying fruits, honey dew, honey from all sorts of rank smelling weeds,—giving us honey to correspond of course—and finally where opportunity offers, filling their hives with honey that is directly fatal to mankind when eaten without caution, as in the case of the poisonous Laurel honey of Va., see page 17.

Bees have wintered well in this section, all on summer stands. None were wintered in cellars in this region. Have never lost any bees here by the dysentery. I have a problem for you, or for the readers of GLEANINGS, viz., What is the most convenient and expeditious method of securing suspended frames from swinging during transportation?

At what price would you send me a dozen copies of the May No. 1875—for distribution? or would you like to send samples to addresses of bee-keepers that I might send you?

T. P. ANDREWS, Farina, Ills. May 5th, 1875.

We have seen no better plan than the one given below. We will send sample numbers with pleasure, to any addresses you may favor us with.

Your little Bee paper containing so much matter, came to hand yesterday, also the *A. B. J.*; and I sat up till midnight reading them. In regard to moving bees in hives in which the frames swing I would say, I have moved bees in them several times across lake Michigan, in the spring, summer and fall, without killing a bee or breaking a comb. Take a piece of wood about $\frac{3}{4}$ inches square, or triangular, like a Langstroth comb guide, cut it as long as width of hive inside, and cut notches in it as far apart as frames hang in live; notches are to be large enough to let in bottom of frames. Put it crosswise in bottom of hive and fasten; hang frames in, put on thick quilt, that honey board when screwed on may press it down firmly on the frame, then put wire screen over portico

and all is ready. It will be seen that I use the Langstroth hive, as a portico is very necessary to give good ventilation. Mr. Adam Grimm tells me that he has yet to lose the first swarm shipped in this way.

ERWIN STANHOPE.

P. S.—We propose to blow our bugle some, after experimenting, in reference to ripening honey after extracting.

Pontwater, Mich. March 5th, '75.

Now, although we should be sorry to advise any thing that might result in loss, we really think the bottom stick might be dispensed with, and we should thus avoid stirring the bees up, just before shipping. With the Simplicity hives, we should then have simply to put old newspapers under the cover until, when forced down, it would press the quilt firmly on top of the frames; the hive can then be turned over like an old box hive, and after the bees are driven down among the combs by smoke, a piece of wire cloth can be put over the bottom, or for short distances, a piece of cotton cloth only. If the wire cloth be used it will be but a short job to put a long tack through it into each of the 10 frames, and we would then transport them inverted. One great reason why we would avoid taking the combs out before shipping, is that the bees always have little braces of wax from one comb to the next, these are so slight that when the metal corners are used, they break off with scarcely a jar, yet when all are in the hive undisturbed, they hold the combs in place with considerable force. In carrying our hives in, in the fall, the combs never slip about unless in a hive that has just been opened, and we have carried such hives, several times, in lumber wagons safely, with no other fastening of the combs. When the colony is small, combs outside of the cluster of bees, are frequently found so loose as to rattle about.

Tell us by all means, friend S. how you succeed in the artificial ripening. Our family are well aware that almost all extracted honey is much improved by being kept for a few days on the reservoir, or in the back oven of our Stewart stove; indeed a neighbor who visited at our house insisted that the honey we used on our table was not like that we sold "*by any means*," and all in the world that made the difference was, Mrs. N. had evaporated it down to have it extra nice and thick for "company."

You ask in Jan. No. if it was not my own fault that 45 swarms did not give more than 550 lbs. honey. Well, you be judge and jury. I will state some facts. I am a farmer, cultivate 160 acres and hire one man about seven months in the year. Have a variety of fruits. Farm well stocked with horses, cattle and hogs, which demand care. In 1866 one year after returning from the army, from 12 old stocks with the increase I received in cash.....\$146.26

Expenditures.....\$41.60

In 1867 Dr.....93.03

" 1868 " to hives.....54.95

" 1869 " ".....18.39

" 1870 " to hives.....234.00

" 1871 " ".....7.25

" 1872 " to h' b'x's.....89.00

" 1873 " ".....13.08

\$551.30

In 1867 Cr.....202.37

" 1868 " ".....19.68

" 1869 " ".....429.30

" 1870 " ".....409.39

" 1871 " ".....458.96

" 1872 " ".....247.20

" 1873 " ".....208.73

\$2121.81

Leaving a balance on Cr. side.....1570.51 after paying all expenses. Not counting my own time or honey used in the family. Have some honey on hand. Will run behind this season as I built a repository 16x20, costing \$209.68.

Now to your questions. The spring of 1874 I took from my cellar 24 swarms, all that I had. I use exclusively the Langstroth hives. The spring being cold and wet their ranks were thinned out rapidly. Two were lost leaving but 22. I increased them artificially to 45. All housed in fair condition.

Since writing above, have closed out nearly all of my honey, and find the footing beyond my expectations, was much deceived in the amount in unfinished boxes. Honey sold in 1874 for \$103.11.

WILLIAM TROYER, Annawan, Ills.

Bees did well last winter; "wintered" 60 in house and 1 on summer stand, and "springed" the same number, with the loss of *only one*.

J. S. WOODBURN, Dickinson, Pa. May 7th, '75.

Right glad are we to hear it friend W. When those who have suffered, are beginning to send in reports like the above, we can begin to take courage.

I wish to have your advice about the best way to get the most extracted honey. My frames are the same length as the Langstroth and 12 inches deep. Would you put 20 of them crosswise of the hive as you do with Standard hives, or would it be as well to make the hive of double width with 20 frames? I do not like the double story hives. Wm. ROBERTS.

Vaughnsville, Putnam Co., O. May 8th, '75.

As 16 such frames will give us much surface as 20 of the L., we would not want to use so deep a frame, two stories high. And as a hive for 16 frames need be only 25 inches in width outside, the combs can be handled very conveniently providing we can have room to stand on either side in lifting them out; accordingly we would have the entrance face the south, and let the bees go out directly under the lower bar of the grape vine trellis that shades the hive; and to have the cover out of the way, we would hinge it to the front end that it might when open, rest against the trellis.

Our honey season is very late but my bees wintered well in cellar and are much stronger than when I set them out. I like the "New Idea Hive."

O. S. BALLARD, Malone, N. Y. May 10th, '75.

I have lately taken charge of 12 box hives for a farmer. Now I would ask a favor. I am to take said hives, transfer them to movable comb hives, do all the work, and furnish every thing. What will be fair for each party to receive from increase of stock and surplus honey? Not knowing how to make a fair contract we agreed to submit the matter to Ed's of GLEANINGS.

REINHARD STEHLE, Marietta, O. May 11th, '75.

As a general thing, we are opposed to either taking or letting bees on shares, because it has so often resulted in dissatisfaction or hard feelings on one or both sides. In the above case our friend is going to start an Apiary, which will be *all his own* for all time to come, should he purchase outright in the beginning, these 12 colonies in box hives, worth now perhaps from 50 to \$75.00. The 12 hives allowed to stand as they are now, would be worth perhaps no more another spring than now, yet our friend, if he is skilful, could during the season, transfer and Italianize them, and without doing more than is usual increase the value of them and their produce to—say he doubles them and gets 25 lbs. of honey per colony—perhaps \$350.00. To do this he need only work at them on an average of one hour per day for six months, say 15 days in all, worth \$25.00; 25 good hives, (one story) will cost complete about \$50.00. Now here is a clear profit of \$200.00 after deducting 75 for the original stock. How shall we divide it? If we give the farmer one-half, it would be an excellent idea for every farmer in the land to get a dozen colonies of bees, and let them out, *providing* he could winter them; and we really don't know but he should have half if he can get them through the winter in good condition. If our skilful Apiarist cannot afford to give so much, then he should buy his own bees. The *only* difficulty in making the above result, is to get 12 strong colonies in May, and we believe the result if the extractor be used, will be rather above than below our estimate. As 6 colonies of Italians in frame hives, are well worth 12 like the original stock, we would suggest that an invoice of all be taken at the beginning and close of the season, the farmer receiving bees equivalent in value to his original stock and half the net profit in the fall—thus taking all the risk of loss in wintering—and returning good strong colonies in May to be worked on shares as before.

As an illustration of how seldom we stop to think that it is possible a particular course of treatment for wintering may neither do *harm* nor *good*, we append the following letters. Our opinion has been for some time that our manure heaps of a year ago, were neither beneficial nor injurious to any considerable extent, and that because a good healthy colony *survives* a large amount of tinkering, it is no proof that it was benefitted thereby.

That GLEANINGS may live and prosper is my sincere wish, although it has some erroneous ideas. Say for instance the hot bed arrangement. It cost me five stands of bees last year. It was a cold spring, but the manure kept the hives so warm, they thought it was mid-summer and would come out and never get back again. When the five went up the manure went with them at a 2-40 rate. It left me with 4 stands of bees. I increased to 7 and took 100 lbs. of honey this spring. Lost one of dysentery caused by water running into the cellar.

C. S. WELLMAN, Denver, Bremer Co., Iowa.

Hives on out door stand went into winter quarters with plenty of stores. Extracted from three hives, two combs from each, put in centre, found Queens all right, took the caps from the hives, (hives are American) covered the frames with old carpet, filled the vacancy above with oat straw, moved the hives a foot apart and threw oat straw around out side; then, piled that obnoxious stuff called stable manure over the top, and three sides, covered all with boards, and waited all winter until Saturday 13th March, before removing the covering from the tops. Found all dry and snug as could be; drew one out from the manure pile when Oh! Oh! Novice what do you think, they were twice as strong as they were in the fall; plenty of brood, honey and pollen. I felt like sending my old hat up to the moon if I had been able. Heigh-ho! for the manure pile, a perfect success. Am making some Standard hives, intend to transfer all my bees into them. Am making them to take in 16 American frames; will adopt the tin rabbits. I have located an Apiary Hexagonal; ground sloping to the south-east, grade one foot in twelve, (1 foot to 12) is that too much?

W. STALEY, Rohrsburg, Pa. March 15th, '75.

One foot in 12, we should think rather too much, not that it would do any harm however, further than to make work inconvenient on so much of a side hill. We should prefer a descent of only about 1 foot in 50.

I took my bees out of the pit March 31st, two weeks later than usual, and found them *all* in prime condition. They had consumed about 15 lbs. of honey on the average. Those nearest the door consumed most. All had as much brood in all stages as I care to see at this time of the year. It would have made your eyes twinkle to have seen those 24 colonies, hives jam full of bright clean healthy bees, and brood in four to six frames capped. I cleaned them out the first fine day and did not find over a hundred dead bees to the hive, and not more than ten or fifteen worms. I have been feeding rye flour since and they still work on it although willows and poplar are in bloom. If it is as good a season as last, look out for a big report from "The economical man." I am so glad you have wintered so well. I never had any hopes of the glass business, although some may make it work.

My father has abandoned the bee business, brought me all the bees he has left—two weak swarms in box hives—and says he will give up trying to get honey the old fashioned way, and is too old to learn the new fangled notions.

R. L. JOINER, Wyoming, Wis. April 20th, '75.

The unusual amount of honey consumed, was probably on account of rearing so much brood in winter quarters, and to do this, if we are correct, they must have large stores of pollen. Was not such the case, last fall, friend J.? We believe it is true, that getting honey the old fashioned way, is growing more and more precarious, with each succeeding year.

Bees have done middling well here this winter. Went into winter quarters with six swarms, came through with five left. Wintered 4 on summer stands, lost one of dysentery; that one had an Italian Queen, the rest black. Two in cellar came through strong as went in.

A. S. WILLIAMS, Kennedy, N. Y.

Rather than that the fault was in any way due to the Italian Queen, we should be inclined to think it might in some way have been brought about by the delay in brood rearing caused by her introduction. Was it not so friend W.?

DEAR NOVICE:—Oh! my! how much easier my little buzz works *and sings*, since I substituted horse power for human muscle. But do not harbor a thought that I have therefore destroyed the foot power. *No sir*, not by any manner of means. It is much too convenient a fixture to have about the shop, to be thus sacrificed. Perhaps you would like to know that I have managed to *double the length* of the belt that runs the arbor pulley, and thereby have vastly increased the efficiency of the belt.

D. P. LANE, Koshkonong, Wis. April 15th, '75.

Nearly all the bees wintered on summer stands, in this neighborhood, are dead.

J. L. DAVIS, Delhi, Mich. March 19th, '75.

If that is the case we shall have to back out before we are started, in our plan of out-door wintering. Will you, or any one else for that matter, give us a full report of an *extra strong* colony that has perished on their summer stand, with plenty of upward ventilation? Give us all the minutiae. With natural stores, perhaps they might die of dysentery, but if they were provided with sugar stores, fed in warm weather, we are inclined to think such a case could not be found. It is a *good rousing colony* that we wish to hear of, remember.

Richard Lord, Muscatine, Iowa, used to run 4 or 5 hundred hives but the "disease" took all but a few. He is one of the successful men but does not take Bee Journals, nor attend conventions. Introduces Queens by *unqueening*, then as soon as royal cells are built he dabs the new Queen with *royal jelly* and in she goes.

D. D. PALMER, Eliza, Ills.

Royal Jelly, from the Queen cells the bereaved colony had started! The idea is certainly a brilliant one whether it succeeds or not, and we are much inclined to think it would succeed. If she had the scent of *their own* royal jelly why should they not think that she hatched out of their own cells? At any rate we have just the conditions most desired, viz., the colony have cells of their own nearly ready to seal. Our friend B. Lundener, wrote several years ago to the A. B. J., that any Queen could be let loose at once safely, in any colony that had just started Queen cells, or something to that effect, and we believe such is the case nine times in ten during the honey season.

I am a beginner in the bee business, and would like to know if frames that have both brood and honey can be extracted without injuring the brood.

Wm. J. HOLT, Ashland, O. May 1st, 1875.

It is now a customary thing to put every comb in the hive into the extractor, and the most inexperienced novice soon learns that the brood is entirely uninjured, unless he is so careless, as to throw it out with the honey, which is quite unnecessary, for it takes a much higher speed to throw out the unsealed brood, than is required to get out the honey.

Will you give a description of the Langstroth hive in your Bee Journal? that a novice may build one if he wishes.

H. QUALE.

Grand Ledge, Mich. April 17th, 1875.

We gave, in March No. of Vol. 1, a very full description, measurements, etc., of Langstroth hive. Of course it is to be made Simplicity fashion, and we to-day, feel better satisfied of the advantages of this, over the old style with its superfluous lumber, and upper stories unlike, than we were when we first advised it.

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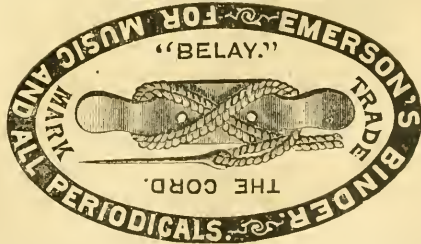
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PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT.

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In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. Clarke, and Mrs. Tupper.

Bee-Keeper's Magazine. King.

Bee World. A. F. Moon & Co.

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Southern Farmer,

Scientific American.

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SUNDRY MATTERS.

We are sorry to say that our efforts thus far to make an arrangement for clubbing with the *British Bee Journal*, have been unsuccessful.

WE would refer those who complain of the long one story hives, to the article by J. P. H. Brown, in the *Bee World* for June.

MISS ANNA SAUNDERS is rejoicing in a honey crop far ahead of her most sanguine expectations, and we feel "badder" than ever as we look at her photo., to think it did not reach us in time to be placed beside Katie Grimm in the Medley.

It rejoices us to see so many undertaking to rear dollar Queens from imported mothers. If the imported progeny all of them, build up and gather honey, at the rate ours do, well may purchasers rejoice in their investment.

SEVERAL enquire if we would advise them to transfer bees in the months of June, July, Aug., etc. We really do not see how we can answer such a question, not knowing the persons. Among our neighbors, there are those who would work so carefully, that they would be almost sure to succeed; and, again there are others who would be almost sure to fail. We are inclined to think that those who make these enquiries, would be quite apt to fail, for the careful ones would go to work and do it at *any season* if they were sufficiently anxious to have it done.

MR. LANGSTROTH, while in Philadelphia, found and kindly sent us two old works on bees, which are a curiosity indeed. One of them, "A Treatise on Bees," by Thomas Wildman, was published a little over 100 years ago; and yet it has more truthful plates of Queen bees, than some we have now. The engravings of the comb and queen cells are very accurate. The other, by John Keys, although nearly as old, contains a drawing of a house Apiary for letting the bees go through the walls, and directs that "the doorways should be painted of different colors, for the bees better to distinguish their respective habitations." Is it really true that there is nothing new under the sun? One might expect to find nothing in these old books but the ordinary repetitions; but with Wildman especially, we find ourselves agreeably mistaken; and on that puzzling subject of the Queen's fertilization, we have to confess that he knows nearly if not quite all that we do.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line. Nonpartial space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

"SWEET are the uses of advertisements" exclaimed Mrs. Partington. We wonder if the good old lady was not a bee-keeper.

SUMMER RAPE SEED 15c per lb. By mail in cloth bag 35c per lb. **A. I. ROOT, Medina, O.**

GENUINE CHINESE Mustard Seed, just imported from France by us. Per packet 5c, per oz. 25c, per lb. \$3.00, sent post-paid by mail. For description see Dr. Kirtland's article, page 18, Feb. No.

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ALSIKE CLOVER.

Nice fresh clean seed, raised in our own neighborhood. Ten lbs. or over, 30c, less than 10 lbs., 35c, sent by mail in cloth bag 50c per lb.

A. I. ROOT, Medina, O.

FOR SALE.

100 COLONIES BEES and a Farm of 65 acres. Extra good location. Average receipts per annum per colony for 4 years \$14. I have to change climate for health.
7-8 G. M. DALE, Border Plains, Webster Co., Iowa.

ITALIAN QUEENS.

QUEENS BRED from Imported Mothers, sent as soon as fertile, for \$1.00. Tested, \$3.00. Full colonies Italian Bees, with Tested Queens, \$13.00.—
Address, J. M. C. TAYLOR.

Lewistown, Frederick Co., Md.

A LARGE finely executed **ENGRAVING**
(Size 9x11 $\frac{1}{2}$ inches, suitable for framing.)

Of the lately deceased

M. QUINBY, OF ST. JOHNSVILLE, N. Y.

Sent post-paid, to any address, for 30 cents.

7 J. H. NELLIS & BRO., Canajoharie, N. Y.

State where you saw this advertisement.

30 QUEENS FOR \$30.

Owing to the failure of the principal honey flowers, I have concluded to raise Queens, and will sell untested Queens, raised from Imported Mothers, at \$7 each, sent by mail. I will sell nuclei in full sized hives containing nine frames, 10x17 inches, with three combs of brood and bees and "dollar" Queens for \$6 each, delivered at Express office. Can be shipped any time and built up in full colonies.

7-9d H. NESBIT, Cynthiana, Ky.

GLASS HONEY JARS.

1 lb. Round Jars per gross.....	\$5.50
2 " " " " ".....	7.50
Corks " " " " ".....	75c. and 1.00
½ Pt. Honey Tumblers, plain or ribbed, per doz..	40
6 doz. in a box. Packages.....	40
½ Pt. Honey Tumblers, plain or ribbed, per doz..	50
6 doz. in a box. Packages.....	50
½ Pt. Honey Tumblers, Tin Top, per doz.....	65
6 doz. in a box. Packages.....	65
½ Pt. Honey Tumblers, Tin Top, per doz.....	75
6 doz. in a box. Packages.....	75

Also Window Glass, Lamp Chimneys and Glassware of all kinds. For sale by B. L. FAHNESTOCK, late B. L. Fahnestock, Fortune & Co., Glass Manufacturers, 76 Wood St., Pittsburgh, Pa. 6-7d

THE BAY STATE APIARY!

WE have made the breeding of
ITALIAN QUEENS

A SPECIALTY FOR THE PAST FOURTEEN YEARS.

All Queens sent by mail.

PURITY & SAFE ARRIVAL GUARANTEED.

7 H. ALLEY, Wenham, Essex Co., Mass.

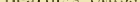
**VICK'S
FLORAL GUIDE FOR 1875.**

Published Quarterly.—JANUARY NUMBER just issued, and contains over 100 PAGES, 500 ENGRAVINGS, descriptions of more than 500 of our best **Flowers and Vegetables**, with Directions for Culture, COLORED PLATE, etc.—The most useful and elegant work of the kind in the world.—Only 25 cents for the year.—Published in English and German.

JAMES VICK, Rochester, N. Y.

Honey Extractors.

Made entirely of metal—no wood about them—price \$1000. In ordering be very particular to give us outside dimensions of frames, or frames that are to be used. Machines made expressly for a frame 115 x 133 — nothing larger \$2000. As we have procured the machinery for making every part on our own premises, we can also supply, Gearing, Honey gates, wire cloth, etc., etc.



Bearings Stubs' steel—Boxes self oiling.

A. I. ROOT, Medina, Ohio.

GLEANNINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

JULY 1, 1875.

No. VII.

FOUL BROOD.

DEAR FRIEND NOVICE:—Ever since you opened your column of "Blasted Hopes" I have thought I might help fill it, but did not because I hoped to have a hand in "Reports Encouraging."

It was not until 1870 that I got nicely into movable frames and Italian bees. Then every thing went well for awhile and in 1872 every hive averaged 100 pounds very nice honey besides increase. Much encouraged by such favorable results and expecting of course to make this my only pursuit, I determined to make a business of it. In the fall of '72 I bought a large stock of bees and material for hives which I made in the winter. Every thing went well until Feb., when that universal disease seated itself in my Apiary and in spring I had six left and two hundred empty hives and nothing to "pay the Undertaker." Not wishing to give up, with the comb and hives I had, I determined to try once more and although a very poor season, reached a nice little Apiary again by fall. But what this time? One of the swarms obtained, contained *Foul Brood*, which swept off all but three by spring '74. Declining to try again, I have now 25 very large swarms in good condition and what I send you for "Reports Encouraging" remains yet to be told. I think my experience will yet be worth all I have lost. What think you brother bee-keepers? In conclusion I would say, I hope yet to make a pleasant and profitable business.

I think foul brood will make a good thorough sweep among old fashioned hives around here. I have had it two years and have pretty well conquered it. I think I will only be safe when it runs its race here.

F. H. CYRENIUS, Oswego, N. Y. Feb. 17th, '75.

MESSRS. A. L. ROOT & CO., Yours of Nov. 20th, was duly rec'd, and would have been answered sooner, but hoped to find some foul brood which I could cut out and send you, but do not find now, a fair sample. It is much reduced now in my Apiary from what it was some years ago. I believe it was introduced here by some comb sent me from Indiana, and it got very bad before I knew what it was.

Foul Brood is the larva which has died, and become putrid in the combs after it is sealed over, emitting a peculiar offensive odor, which once recognized would be readily known in any hive, if there was much of it. When but little, it might not be detected by the odor; but if suspected, by seeing scattered over a comb a few capped cells, open them, and if they contain dead larva in a *partly putrescent* state, it is foul brood. If a few cells have a hole in the cap frequently about as large as a pin, it is foul brood sure, and the punctures are made by the bees apparently starting to remove larva and quitting it, probably from its being so offensive, or from its pasty state. In winter however they do clean out many combs if not too bad, or the swarms too weak. I think they only remove the dead larva after it gets dry.

The swarm which was most populous, and produced most surplus honey this season, (nearly 100 lbs.) was most broody last fall, but cast no swarm, this season or last. Like cases have been noticed before.

CHAS. CARPENTER, Kelley's Island, O. Dec. 5, '74.

Here we have a case where the bees did recover after all, and seemingly without any aid. Although we are unprepared to advise without having had any experience, had we an infected hive, we should certainly try to "weed out" the diseased cells, before deciding to destroy the whole colony. If all the bees were removed in the winter, and the hive and combs subjected to an intense freeze, would it not destroy the

germs? Dr. Salisbury has decided that it is a microscopic fungus, *Cryptococcus Alveario*, (we always feel better when we know?) what it is) Can he tell us whether freezing would be likely to prove fatal to it?

WINTERING TROUBLES IN CANADA.

BY ILA MICHENER.

DEAR NOVICE:—I do not feel despondent neither am I grieved, for "the Lord giveth and the Lord taketh away, blessed be the name of the Lord," but we have had a revisitation of the troubles of '72. For two years we have had great success wintering in a bee house, but this winter the reverse. And now I am more thoroughly convinced than ever that 'twas not the cold that killed the bees. The 6 we wintered on their summer stands are all alive yet, while of the 13 wintered in the bee house, only 6 remain; 3 died of dysentery, 3 swarmed out and joined other hives and one lost their Queen.

I am sure it was the late gathered honey that killed them. The Golden rod yielded abundantly, and some of our hives had too too much honey even if it had been all sealed. The Italians were the first to die, 'twas ambition killed them; they gathered far more than they could get sealed. If I had only put the combs in the extractor, and slung out the unsealed honey I might have saved them. We have only one Italian stock remaining, they are hybrids, and were wintered on the summer stand. They had not had their early gathered honey extracted, in fact all those wintered out doors had been left for box honey, none extracted, except about half of one hive, and that hive has had the dysentery to some extent. But it was not the extractor that killed my bees, for I extracted all the honey from one stock, after the frosts came, fed them thick sugar syrup, wintered them in the bee house, and they have come out all right. I never saw a swarm of bees winter better than they did; they hardly lost a dozen bees, while all the rest that were wintered on honey gathered from Autumnal flowers, have soiled their hives and combs badly, have died or dwindled away till they are quite weak, and here Novice let me ask you, how do you clean combs soiled with excrement? I will not want any honey labels nor any thing else until I see whether I can get them built up again. I am not the only one that has had losses in this part of the world, some have lost all their bees. I believe fully one half of all the bees in this part of Canada have died, but if you look around you will see that it is the late swarms generally that have failed, and this agrees with what I noticed when "I was but a child," that late or buckwheat swarms did not winter well, even if they had their hives well filled.

You ask for "minute reports" from those using the cold frames, well after receiving Herbert A. Burch's book I was foolish enough to try one. I made it 6x10 feet with the glass 3½ feet from the bottom. I put two swarms in it about the middle of March, and they eventually got together in one hive, except those that bumped their brains out against the glass, poor things.

The cold frame might do for giving bees a fly occasionally during the winter, if you had a mind to stand there and shiver in the cold, with your eye on the thermometer beneath the glass, for fear of its getting too warm inside, and then go inside the frame after the bees were done flying, and gather up those that remain on the sash and put them in their respective hives, but even then there is the danger of bees getting in the wrong hives and killing the Queens, or perhaps after a while they will all get in one hive, as mine did; I only tried two swarms. But for building

bees up in the spring, never! Mine would hardly notice nice honey, let alone working on meal.

Low Banks, Ontario, Canada. April 15th, 1875.

CALIFORNIA.

DEAR NOVICE:—So much has been written during the past year or two, laudatory of this section for the pursuit of bee-keeping, and so general has become the anxiety of bee-keepers for fuller information in relation to this Eldorado of hive hopes, with a view to coming here, I thought a few items of facts otherwise than of *bees* might be of interest, and perhaps save many a heart-ache in the future.

Leaving Kansas, the land of the grasshoppers and drouth: 10 acres of which—pardon me for the digression—is worth this whole County, the trip to San Francisco was over the usual 1500 miles of Sage brush, and grouse wood, alkali, sand and general desolation characteristic of that portion of our country, until the west side of the Sierra Nevada was reached where one finds scenes of surpassing loveliness, dotted with thriving villages and a general air of go-ahead, more grateful to the tired emigrant, than can easily be imagined.

From San Francisco, there is but one means of access to San Diego Co., and that is by steamer (a monopoly line) down the coast 468 miles S. E., past Santa Barbara and Los Angeles, the best portions of Southern California, at a cost of \$15.00 for cabin or \$9.00 for steerage, gold, one arrives at the Bay of San Diego. The eye rests on a straggling town—built near the beach with treeless surroundings and high enough looking mountains for the back ground, distant 15 to 20 miles. The town is situated about 18 miles from the Mexican boundary in latitude 32°, about as far South as Savannah, Ga., and is expected to be the terminus of the Texas Pacific Railway.

Off the boat, over a long wharf and one enters a town of about 2000 people, which has an air of being deserted. You see no life, no business, no sign of trade except in wool, at one or two houses which seem to buy all that is offered at 12 to 17c. Of this great staple great quantities are sold as it constitutes the only product except honey, of a large extent of country.

Let me premise that vegetation requires *water*, and that water does not *run* around town, but is found only by digging deep wells, from which it is lifted by wind-mills into large tanks from which it is distributed through hose to the gardens.

There are many beautiful houses in town surrounded by gardens filled with the choicest of elegant flowers which bloom the year around, or as long as they pour on water.

Two steam mills fitted with machinery expressly for cutting bee-hive stuff have been kept at work supplying the demand for hives and section boxes. There have been about 12000 hives made, using up over 300,000 feet of lumber—red-wood and pine.

Last year the honey crop was so exceptionally great that every body here who had money, bought a few colonies of bees, went out to the mountains, 15 to 50 miles, and took a *rench* or, as men in the West would say, "took up a homestead," or "squatted" on a claim, some went with their bees, some let them out on shares, giving one-half the increase and one-half the honey, furnishing one-half the new hives and one-half the section or honey boxes.

Let us go out and hunt a location too. With a good horse we leave the town and immediately in its suburbs reach a high rolling country over which we travel about 20 miles. This section is not used for bees. It is covered with cactus, grouse wood and low bushes; the soil being sandy gravel mixed with clay. Plenty of horned toads, snakes, scorpions, swifts, owls, ground squirrels, gophers, rabbits and quail abound here. Perhaps once in 5 or 10 miles you will see a tree, or an elder bush grown to a tree. They have live oak, elder, sycamore and cottonwood only, so far as I have seen. Then we come to the granite range of mountains which runs N. W. and S. E.—high granite ranges which lie in every direction, cut up by canyons or narrow valleys, and it is in these canyons, surrounded by these bare forbidding mountains, the bees are kept.

To an Eastern man the whole trip is dreary and forbidding in the extreme. Not a tree, bush, flower nor any thing, but among perfect strangers, he feels a stranger in a strange land. Among these canyons, at from one to three miles apart, you find the bee-ranches—simply 50 to 500 hives of bees standing close together in the sun, arranged in rows or streets with the inevitable veiled keeper among them attending to their wants. A few rods from the bees stands a small house, perhaps 12 feet square, used to make up the

hives and store honey in; a little farther off, the house of the bee-keeper—small as the honey house, not plastered and quite open to the weather; indeed they say they have no cold weather, and hence do not want a tight house. Here the bee-keeper—usually alone or with an assistant—remains for months at a time, rarely seeing strange faces, attending solely to bees.

At such a place, among 400 hives of nice Italians, I found the King of bee-keepers—Mr. Harbison—busy with his assistant arranging for the storing of his honey.

Mr. H. is a quiet gentleman 47 years of age, about 5 feet 10 inches, in height, blue eyes and sandy beard, who now has half a dozen Apiaries of from 400 to 600 colonies each, at distances of 3 to 20 miles apart. He counted 3000 stands of Italians last spring. The first year he was here (1870) he got but 30 lbs. of honey to a hive, the next 70 in 1871, 90 in 1872, 60 in 1873, and 150 in 1874. These figures from his own lips do not convey an idea of great fortunes in a *hurry*.

Last winter the bee-men bought hive material for about three swarms from each old stock. In March the bees began to swarm, but the 1st of April a heavy frost—the heaviest known in years in this country—cut off all the flowers, and reduced whole Apiaries to starvation. Many fine new swarms deserted their hives, or starved to death. Swarming was stopped, 30 per cent of the young Queens were lost in their fertilizing flight. Swarms came out and went into other hives, and so a general disappointment has resulted. Of the loss of young Queens in their undue flight, Mr. Harbison told me, that from long observation, he believed there were workers which he calls *avengers*, which killed them, while outside, or else followed them inside the hive to kill them.

The flowers did not secrete any honey of consequence until two weeks ago, and as the sage was injured, no one anticipates half a crop of honey. The main flow of surplus honey is gathered from May 30th. to July 1st from white sage. There are other plants which produce quite as much, though not so white and nice.

Nearly every Apiarian now has on hand enough empty hives for next year's work. They are not, as a class, very sanguine of great success. Many are disappointed either in anticipated results or so disgusted with the utter loneliness of this life, isolated from all society, far from town or means of procuring the necessities of life, that a great many good locations are for sale very low. Bees can be had this fall at \$3.00 or less in box hives, full of honey, or in good frame hives at \$5.00 each. The time to come here is from October to Jan. 1st to get ready for the summer's work. Let no one come expecting to find churches, schools nor society, but to be isolated from mankind while engaged in the business. To sell a farm at the East and come here to raise honey is the height of folly, and whoever does so will never cease to regret it. It will be far better to come and look at the country before bringing families, for all is not gold that glitters. Let no one bring any furniture, and, by all means, bring no bees. The cost even from San Francisco here is more than they are worth. Every thing here is high, probably 20 per cent higher than in any of our Western states and all payable in gold. It is costly work getting started. About \$2000, gold, is required when one gets here to get to the end of his first year's honey season. Horses are low, wagons double Eastern prices. Honey extractors they will not use. They let all bees swarm naturally and never raise Queens to increase. Here comb honey is worth 16c, for the choicest—in gold.

The citizens of both town and country are from Northern and Western states—a class of white people who are glad to see others come among them; are hospitable and kind, readily giving the stranger the right hand of fellowship and all the information in their power. Lumber is cheap as in the state of Wisconsin, of two kinds, red-wood from the northern part of this state, and pine from Oregon. Fuel in town is scarce and high. In the country, we can now get this fuel for the cutting and hauling. Very little is required at any season. No fire except to cook with is ever used. The stores and churches do not have any chimneys, so that of course they never have a fire.

The climate is the great "stock in trade." Never cold, never hot. Since I have been here—a month—the mercury has not been above 70°, or below 60° more than a half dozen times. It gets tiresome at first to have such a sameness in the weather, and one longs for a good thunder storm or a blow from some direction. It never rains from April till November and some years but little even during the winter months. Now every thing looks dead and dried up, but during the whole winter the country is in the height of beauty.

Thousands of people from the East come here in the

fall to spend the winter and regain their health. People wear their winter clothing and under clothing the year round, but rarely an overcoat. At church you see half the ladies wearing furs or heavy dark winter dresses, and the other half in white or other summer clothing—so that every thing or any thing is the fashion.

I think from comparison of prices that goods in general are about 20 per cent higher here in *gold* than at the East in currency. EMIGRANT.

San Diego, Cal. May 21st, 1875.

ARTIFICIAL SWARMING AND QUEEN REARING.

BEFORE going ahead in this work, we want to be sure we are all ready, and to illustrate one point, we will mention that our neighbor Shaw, of Chatham Center, made us a call a few days ago, and after seeing one of our best colonies, was shown one of the poorest.

"You say you have been making new colonies?" said he.

"Only about a half dozen."

"The first colony we examined is so full of bees, brood and honey, that the Queen cannot lay to advantage."

We assented, and spoke of making more colonies.

"And the latter," continued he, "cannot give the Queen employment, because she has too few bees. They have, in fact, at least 6, out of their 10 combs, entirely unoccupied, have they not?"

We assented, and ventured to add, that she had been depositing two or three eggs in a cell for a month or two, because she had insufficient room.

"And yet you are using combs of hatching brood to make new colonies?"

"But Mr. Shaw do *you* practice what you teach? do you make no new colonies until all your Queens are furnished with plenty of bees?"

"Frankly, I do not, and it is just because I, like many others, have been in so much haste to count my colonies by the hundred, blindly trusting all the time, that the weak ones would by some chance build up before fall; the result has been, that I have always been 'puttering' with weak colonies and nuclei. It is just because we have not got the nerve to make all *strong* before commencing Queen rearing, and making artificial colonies; that is the cause of 2/3 of our losses, *I verily do believe.*"

Now dear readers, have you got the nerve, or energy, or "go-ahead," to make *all* your stocks good before commencing to make new ones, or to raise Queens, or any thing else? We have to-day (June 19th) colonies that cover only 4 or 5 combs, that apparently do not store one ounce of honey per day, while those side by side that cover 10 combs, and fill their hives full, are bringing in 2 or 3 lbs. of clover honey per day.

Said Mr. Shaw just before leaving, "If I had 50 colonies like some of your best, I would be content to do nothing else than work with them during the summer," and were we not all so ambitious to have a few bees scattered through a great many hives, we might make a summer's work that would give some profit, and not end in disaster before the return of another season. One point more, and that is, that each hive contains a Queen equal to the task of *keeping* a colony in full strength, and we are ready to consider Queen rearing with

the aid of the Lamp Nursery; and by the way, if you do not wish to go to the expense of a nursery until you have tried it, you can select some kind of a tin utensil that will hold one or two of your combs, and will set inside of your wife's wash boiler. Put in a flat-iron or two, or some weight sufficient to hold it down, while you fill the space between this utensil and the boiler with water; a space filled with water should also be left of about an inch between the bottoms, the idea being simply to surround the vessel containing the combs, with water that is kept constantly at a temperature of from 80 to 100 degrees, by means of a common kerosene lamp kept burning under the boiler. If the boiler is large, it will take 15 or 20 hours to get it all warmed up, and then you can control the temperature very easily, by turning the wick up or down. Pack newspapers between the two vessels in such a way as to prevent your Queens from tumbling into the water. Whatever you do, please don't have any family "jars" in regard to ownership of the boiler, when wash day comes. Now for business.

As we advised last month, get your larvae for Queen rearing, by putting a clean worker comb in your colony containing the imported or best Queen, leaving it not longer than to allow the larvae to be just visible as they emerge from the egg. Now put it into a strong Queenless colony, having no other brood. Repeat the operation every three days, and as soon as all the cells are capped over on any comb, brush the bees off very carefully,—you must not shake them at this stage—and place it in the lamp nursery. As these Queens will all be hatched before a single worker bee comes out, we can easily avoid having any bees in the nursery. When it is time for the Queens to hatch,—16 days from the time the eggs were laid—you should examine the nursery the last thing at night, the first thing in the morning, and several times during the day. By holding the comb near the ear you can hear the Queens when they commence to gnaw out. Let them come out, or, if in a hurry, cut them out with a sharp pen-knife; and you have got fine Queens that can be put any where with impunity. If you put them in a hive containing a Queen, they will be killed when they get old enough to begin to show their royal prerogatives, but if put among *any* bees that have no Queen, they will behave precisely as if hatched there, providing they have never seen other bees, and have been hatched but a few hours. To make a colony with such a Queen, you have only to lift out about one-third the bees, combs and all, from any strong hive, and drop the Queen among them, or if you choose, let her run in at the entrance; this is all, for she will commence laying before the brood they have already, is all hatched out. Our plan is to divide the colonies as fast as a Queen hatches. A very fine colony was made last season, by shaking the bees from 6 combs in front of a hive containing empty combs only, and while they were traveling in, throwing the Queen among them. In fact, in one week, the Queen had made a successful trip, and soon the dry combs were teeming with brood and honey. With this nursery you will observe that all cutting out Queen cells is avoided.

OUR OWN APIARY.

MAY 14th. Three colonies are Queenless.

One was quite an old Queen, and two were young ones; all had been laying briskly up to their demise. Only 43 now that have Queens, but many of our best now have brood in six combs. The colony suspended on the spring scales was last fall only ordinary, but now bids fair to outstrip all others. With the high winds we have had this spring, their hive has been swinging almost constantly, and in spite of the wires attached to steady it, it has been bumped about at times so as to fairly jar the combs out of place, and we really feared bees could not live, disturbed so constantly in this manner. Strange to say they not only live, but have been the most active colony at the open air feeding. When all the rest have been driven home by cold or rain, these fairly tumbled out of their hive in their eagerness to get the largest share of the spoils.

Several have lately advanced the idea that stimulative feeding in the spring was a mistake; that it really did not help matters. Aside from our own experiments, we would point to the results of open air feeding given on pages 79, Vol. 1st, and cover of Dec. No. Vol. 2.

May 15th—To-day it is quite cool, with prospect of a frost. In regard to our 3 Queenless colonies we reasoned thus: Although they have cells started, it will be two or three weeks before they can get laying Queens, and during this time they could rear a large amount of brood if they only had the eggs; now as we have several colonies the Queens of which are putting two or three eggs in a cell because they have too few bees, is it not plain they should be united for their mutual advantage, even if the result be that we have 43 colonies instead of 46? This idea we put in practice at dinner time, by simply lifting the combs and all out of their hive, and setting them in with the Queenless one so quietly that not one of them took wing. In one case we lifted the Queenless colony thus and set them in with one containing a Queen. An examination a few hours after, showed her majesty in the very heart of the camp of the enemy very busily depositing eggs, while a circle of sympathetic observers viewed the progress of the work, with every appearance of complete satisfaction and hearty approval. And why not? They had prepared cells for eggs days ago, and probably after their fashion had lamented their sad fate as their numbers were lessening daily; the Queen on the other hand had been putting two eggs in a cell, and then wishing in vain for a broader field of usefulness. Are you sure no such bad economy is to be found in *your* "bee yards" kind friends? We have introduced six Queens, or rather united 12 stocks in this manner this spring, and have had no failures. We have been surprised also, to learn that the bees after being carried where there is a fertile Queen, show very little if any disposition to return to their former hive.

May 19th—Heighho! Honey is coming in. Yesterday we omitted their morning rations out-doors, for the first time, and yet our suspended hive showed a gain of half a pound, and to-day, although there isn't an apple blos-

som to be found, they have actually gained *a pound and a half*. We can find no other source than the hard maple.

The colony given a "tea-kettleful" of feed has staid at home to fuss with it until they are far behind their fellows that have been fed in the open air; those among the latter that commenced first, and were most active, are the ones that have gathered the most pollen, and are now our best stocks. We have decided to feed all summer long whenever we have a week of weather that does not afford pasturage. If we feed only sweetened water, it will not prevent them from going to the fields, and in fact they will not notice it, until forage fails. We are going to raise *bees* bear in mind, and at present there is a much greater demand for bees than for honey. We really believe we could sell 1000 nuclei at good prices if we had them. Cannot those who complain that honey don't sell, help supply the demand for bees? We really have been obliged to advise those just commencing, to send way across the Union to Adam Grimm, to get bees for a start. Who will offer them at a reasonable price?

May 22nd—A plump $1\frac{1}{2}$ lbs. each day, the suspended colony shows, and we think it all comes from dandelion and cherry blossoms. Do you know what a glorious beauty there is in a field yellow with dandelions?

While our strong colonies are growing finely, our medium ones are actually going down hill; we explain this by the fact that the latter all ceased brood rearing during the freeze (nearly three weeks ago), and now they have no young bees hatching, and their brood is almost unprotected. Young bees are seen scattered about on the ground in the morning, unable to fly, so thick that we have to be careful in walking among the hives to avoid treading on them. We can conjecture that these are weak, because they were insufficiently fed in the larva state. Weak stocks and nuclei! O why were such things ever thought of?

June 5th—The yield of honey ceased about May 26th, and since then we have resumed the out-door feeding, just enough to keep brood going.

A few days ago we paid friend Dean a visit; Mr. D. uses division boards. We have not used them in the spring, and perhaps we got an idea that they were not very important, from a remark of Gallup's, we think, that he would as soon have a comb as a division board and they were an extra bother too. We noticed last season that Mr. D's division boards hung on the rabbets like frames, and that they were beveled sharp at the edges so as to be easily movable, and concluded as they did not fit closely—having a space of $\frac{1}{4}$ inch at the bottom for the bees to get under, besides "loop holes" under ends of the frames, formed by the metal rabbet—that they really were not much better than a whole frame of comb.

Well, friend D. commenced showing his bees—opened a hive near us and showed almost every comb filled with brood clear down to the lower corners of the frames—do you remember we once objected to a deep or even a square frame because the bees would not extend the brood clear down until late in the season? Well, these Queens laid eggs clear down to the bottom board, and the bees "cared for them"

too; the next hive had only about 6 combs instead of 12, but these 6 were equally well stocked with brood and covered with bees, and then we asked to see his very weakest colony.

"A nucleus?" said D.

"Well yes, a nucleus. We want to see if your bees *always* fill a comb with brood clear down, before they take another."

"Why that is just what I have been trying to tell you. I *make* them do it with the *division board*. I never give the Queen another comb, until she has filled those she has clear full, and has bees enough to cover another and take care of the eggs." And so we found it clear through the Apiary. Bees were found clustering out in front of hives as though they were a "big swarm," and on looking inside they had only *two combs*, and both of these,—one against the front end, the other close to the division board,—filled with brood as before. When they began to get crowded out, and not until then, they were given another comb. Do you see why the freeze did much less mischief with his bees than with ours?

Yesterday we called on friend Blakeslee. He wintered 50 colonies in 25 L. hives—puts in a division board in the fall, and winters them on 4 combs each. They are now full of bees, and are hanging out—of course one entrance is in front, and the other at the back of the hive,—and he is busy at work giving them a full hive each. We gave him this idea, two years ago, but our first trial of the plan resulted in so much loss, that we abandoned it, yet Mr. B. has succeeded nicely with it for the past two seasons. Do you see that on the same principle of Mr. Dean's, Mr. B's bees do better on four combs than they would in a full hive?

The locust trees are in full bloom now, yet not a bee is to be seen on them. A few years ago we wanted to plant a *Locust Orchard*, but are glad we did not, now, it is so seldom they yield a crop of honey. The Linden Orchard is looking glorious—masses of bright green foliage in strait rows of almost half a mile in length.

June 12th—A whole pound of honey the day before yesterday, and *two* whole ones yesterday were indicated by the spring balance, and it is in all probability from the clover, locusts furnish nothing to speak of, although the trees are white with bloom.

On the 10th, we paid a visit to Mr. Coe, the patentee of the house Apiary. The building is very pretty and tasty, and the bees going out and in through the sides, with the square of different colors painted over each entrance, gives an effect on a grass lawn that to our eye is *decidedly* ornamental. On looking into the interior, the visitor is even more delighted, for arranged on broad shelves on either side, are observatory hives, having a glass over the outside comb, that gives a view of all the workings of the hive. In one where the bees had filled the number of combs given them, we saw the Queen depositing eggs, with all her wonted diligence. The frames are close fitting sides, and the shelf they rest on, closes the bottom, while the tops are covered with a piece of woolen cloth. In starting a colony, a board the size of a frame is first set up before an entrance, and at a little distance from the wall,

then two or three combs with bees are placed against this, then the other board which contains an observation glass; each of these boards has a screw in the side, and a piece of tape or a rubber band, holds the whole together. As we have said, when all is cleared up, and the bees are seen only through the glass, the beauty of the arrangement is enough to set any one wild with the idea. Mr. Coe uses tall frames, as it gives him an opportunity to pile the boxes up on both sides, and this very feature brings the sides so near the centre of the brood cluster, that the moment the frames are separated, the bees make exploring expeditions to see what is the matter, in a way that is very annoying when the frames are to be replaced. Mr. Dean who accompanied us, was so disgusted in his attempts to open and close a hive without killing bees, that he denounces the house altogether, unless it be for box honey, and we tried in vain to convince him, that it might even be *possible*, to so arrange things, that extracting could be done inside. We must confess that the sight of bees hopping about on the floor in imminent danger of being trampled under foot, and taking their own time to get to the window, was any thing but encouraging for the extracting business. The fact that similar houses have been in use for years for box honey, and that none of them seem to obtain permanent favor, is rather against them. Mr. Coe however may have made some valuable improvements. His patent was granted in Jan.; we have not seen his claims.

June 14th—As it was quite cold yesterday, index only showed $\frac{1}{2}$ lb., but to-night we see the hand has traveled around to the tune of *three pounds and a half!* White clover isn't a failure in our "ranch" this season any way. Have made three new colonies, and Dadant sent us an imported Queen, that we gave four combs of hatching bees (don't pay to run any risks with \$10.00 "insex,") so we are now 47.

On page 62, we mentioned a colony that had "sick bees" even in warm weather; these got well and now every bee is as healthy as need be. But in another part of the Apiary we have had a similar case for more than a month past, and the trouble seems to be getting alarming. Bees may be seen at all times of the day around the entrance, hopping about and exhibiting a peculiar, nervous twitching, which finally ends in death; on opening the hive, these nervous, twitching bees are to be seen all through the colony; many of them presenting a queer black look, and some of them are so wasted away as to be mere skeletons, painful to look at. The Queen is not of the imported stock, and seems to be quite prolific, and brood rearing is going on finely, yet if something does not turn up, the colony must perish. A few of these bees are found in other hives, but they may have crawled in by mistake. In the first case of the malady, we supposed it was caused by some improper food they had collected, and that it would cease when they began to gather new stores, which seemed to be the case; but in this latter case, the trouble seems to be rather on the increase. Whether or no it has any thing to do with the prevalent spring dwindling we are unable to say.

June 24th—By some freak of fortune, our Apiary counts 51 colonies instead of 47. We

don't really see how it comes, but as they all came there honestly, we will try and be content without inquiring into the matter. It may be the Automatic swarmer has been at work "on the sly." For the last ten days the yield has been from 2 to 4½ lbs. per day, and the suspended hive got so full of bees that we removed 4 combs, bees and all, gave them a Queen that a friend swapped us for a Medley, and now they are a fair colony, too. We have not as yet commenced extracting, or rather have taken out but little. In consequence of our frequent rains, the clover honey is quite thin, and has a raw taste; and we are determined our honey this season shall be as good as that in the comb. We have been waiting for them to cap it, until the combs are all filled with brood and honey, and now we really have no alternative but to put on the upper stories, and make use of our stock of reserve combs that have been idle for two years. In using the upper stories this season, we shall work a little differently. We have been in the habit heretofore of raising up some of the brood combs; now we allow them to remain in the lower story, shut down close, until every comb is filled, and they just begin to get crowded; then if upper combs are put on they are filled with honey very speedily, and not much brood above. The brood does no particular harm, yet it is much easier getting the bees off from combs that are all honey. Also, by using our drone combs above, and putting at a distance of about 2 inches from center to center, we get as much honey by handling only 7 or 8 combs as we would otherwise with 10. These very thick combs can be kept expressly for the purpose, and it is just the nicest fun to see our light extractors relieve them of their weighty contents. Our colony of sick or jerking bees is rather on the gain. Although no parasites are visible on them, their behavior was such that we gave their hive a good dusting with tobacco, feeling that "we must do something," as people often do when they take medicine. Although they are improving, we really cannot think their treatment has much or anything to do with it.

June 25th—Our suspended colony is the life of the Apiary. Although we divided it as mentioned on the 14th, they gathered 6¾ lbs. yesterday and this morning sent out a rousing swarm. It had rained during the night, and they being vicious hybrids, we expected some show of stings, for they in their want of wisdom entirely overlooked the ingenious *Automatic swarmer*, and clustered on a limb that we did not wish cut off. We thought of a veil, but finally approached them with a clothes basket, and directed Mrs. N. to spread a sheet over it just as soon as we shook them all in. This she did, and then, in accordance with urgent advice on our part, beat a precipitate retreat. Now these very bees behaved in the most exemplary manner only day before yesterday, when we were extracting, but this morning they excelled all hybrids, in giving those peculiar hissing stings that fetch blood at every puncture. They "don't hurt" now, but they did an hour ago, and we are now thinking whether it would not have been better to have *sawed* off the limb and to have taken them down quietly. If it were not for

the Automatic swarmer, we certainly would "saw off" that Queen's wings, and perhaps while we are about it, the wings to the whole troop of the eccentric royal daughters. We put them into the Quinby hive, and now for "box honey" once more.

June 26th—Mr. Blakeslee says his suspended hive has furnished bees for *five* nuclei, and yet he has been obliged to take away all their combs but two, to prevent swarming. In 48 hours after this they gained *fifteen* lbs., although they had to build the combs to contain the honey. A friend suggests that the swinging about in the wind is analogous to their native homes in the forest, and this accounts for their unwonted activity. Fifteen lbs. in 2 days is rather a strong argument in favor of box honey. Both colonies are confined to a one story Simplicity L. hive, as our scales only have a capacity of 62 lbs.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT.

EDITOR AND PROPRIETOR.

MEDINA, OHIO.

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MEDINA, JULY 1, 1875.

AND thou shalt take no gift; for the gift blindeth the wise, and perverteth the words of the righteous. Exodus, xxiii, 8.

A. B. J., for June was on hand about the first of the month, but *Magazine* not until the 19th, and *World* on the 22nd.

MR. MERRIAM wrote on the 16th, that one who would induce Eastern people to sell out and go to California to keep bees, ought to be "hung."

THE Queen received from Dadant appears to be a young one; this is quite an item, for if we are to keep one on hand to supply larvae for Queens, one 2 months old, is worth double one that is 2 years old.

SOME Summer rape and Chinese mustard were sown in our garden, it seems to us not more than 30 days ago, yet both are beginning to blossom already. If honey alone was the object, it seems these seeds might be sown even during July and August. Bees are too busy on the clover to visit them now.

WE really do not wish to be under the necessity of lumbering up every issue of GLEANINGS with a list of the wares we keep for sale and the prices of the same. Can you not be a little more careful of the price lists we mail you once a year or oftener, dear friends? We wish to devote these pages to some better purpose than a constant repetition.

C. E. POTTER, of Watkins, O., and others, are informed that chloroforming bees to transfer them does not work well in practice. If stupefied, they would remain in their cells where they would be sure to receive injury. We much prefer to have them alive and capable of being driven out of the way by proper administration of smoke.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

SUPPLEMENT---JULY 1, 1875.

No. VII.

OUR NEW "AIR CASTLE."

DEAR FRIENDS:—We are again much interested in a new project, and for fear it may be only another glass house experiment, we prefer to talk to you about it in a supplement, feeling as we do that the pages of GLEANINGS should only be occupied with matter of real value. Should there be found any thing of real use in the following we shall be most heartily glad of it.

Extracting is a laborious operation as most of you know from experience, and a great portion of the labor involved is the necessity of carrying the combs from the hives to the extractor and back again. Whether we put our extractor on a wheel barrow as Mr. Langstroth suggests, or make a can with a tent on it to run between two rows of hives *a la* Blakelee, or arrange the hives hexagonally about the bee house doors, in either case much labor and lifting is involved. Again, if we carry our bees into a cellar or bee house during the winter *a la* James Bolin and others, and besides that, carry them back during unfavorable spring weather, whether we do it by hand, or wheel them in on cars, it is an expensive and troublesome operation.

Now we need hardly say, that our bees would as soon store their honey in one place as in another, for that matter, they would store it directly in the extractor without any trouble at all. When a bee is flying home laden, why do we insist on its carrying its load to some spot, perhaps rods away from our extractor, while we with surprising stupidity sweat in the broiling sun, as we lug the heavy combs to the extracting room and back again? If we don't tell you of our most precious and brilliant new hobby pretty soon, perhaps you will begin to think we have got a "right" or something to sell finally. On the contrary it is, if of value, a free gift, and is only accompanied with a fervent prayer that it may aid you to success in your chosen branch of industry.

The plan we are just about putting into execution is as follows:

Suppose yourself furnished with a neat small extractor, and all the implements for the business, and located,—well anywhere, say in the centre of your garden for instance. As it is sometimes necessary to extract during wet and muddy weather, we think you had better have a clean level floor about you, say for a distance of seven feet from the centre of your extractor. Now should you work very long during a brisk yield of honey, in such narrow quarters, you would probably find it accumu-

lating about you, so as to be unpleasantly in the way; on this account and some others, we will have a nice clean cellar under our platform, capable of holding a large tin-lined tank in which the honey may be allowed to stand *a la* Muth, until it is well settled, scum has risen, etc. A suitable gate will run it from this into barrels, and a car can convey them to the wagon to be shipped. A side hill would be a very convenient place to make this cellar, and at the same time have our extracting floor on a level with the ground. Very well, now where will we have our clever little friends unload their burdens of sweets? We cannot very well ask them all to put it directly in the extractor, as that might lead to "onpleasantness," but can we not have 50 colonies store their honey all within one yard of the machine? Now be mild, and wait until we get our "Air Castle" built, before you attempt to "kick it over." It is our pet hobby, and we might "fight like blazes" if perchance you could not run the fastest after you had done it.

If you draw a circle on your platform, so that it shall be at all points not more than 6 feet from the center of your extractor, its circumference will be about 36 feet, and if we should plant 20 comb hives so that their entrances were all outward, with the back end board resting on this circle, we should be able to get in about 25 hives. If we knelt before the hives when lifting out the combs, (as we usually do,) a shelf containing another similar tier of hives could be placed not more than 4 feet above the floor, and still be out of our way; this would make the 50; and their entrances being in a much larger circle, would be on an average of about 2 feet and five inches apart, and each one would face a different point of the compass. We have repeatedly had bees do well, when the entrances were less than 18 inches apart; and by making them dissimilar, we think that not even any danger to Queens need be apprehended. As we have got these hives in such excellent and compact shape for wintering, perhaps we had best put a double sawdust wall all around them, and a double roof overhead. With this number of good colonies grouped so compactly together, we need have little fear of frost inside. As it will be less work, we will make our building an octagon, instead of a circle, and each one of its 8 sides will contain three hives even if we use a frame as long as the Langstroth. These three will be built all in one, with only very thin boards to divide them, and as all is well covered from the weather, a thin cloth covering will be all the better, because we expect to

keep the whole inside of the room warm in winter by retaining the animal heat from so many colonies, so closely packed. For entrance passages, we will use round hollow sticks—with a two inch bore, say—and these will reach through our packed wall, and be so arranged that all may be opened or closed by a single lever. The middle one of each three hives will have the entrance in the centre, the two outside ones in the outer corners; this gives us entrances about two feet apart, and only *three* in a row, at that. We think all experienced bee-keepers will agree that there would be little danger of mixing with our 48 colonies arranged as above.

Now, our underground arrangement of last winter showed that it not only kept the hives above freezing in cold weather, but that it also kept them below a brood-raising temperature in warm weather, and to avoid this we will have large doors on both the east and west sides, to be left open whenever we wish the interior to become quickly warmed up to the temperature of the outside air; our thin walled hives facilitating this, you will bear in mind. Again, during the spring months, the air is often quite warm in the middle of the day; this we will take advantage of by opening the doors, and then closing them early in the afternoon until the next day, etc. Who has not felt surprise, on going into his bee house some cool morning, to find it almost as warm as the air had been the previous day when it had been closed all night? To give the bees, in winter, about the same benefit of the sun's rays as they would get when kept out of doors, we will have several double windows, where they will be conveniently out of the way, for we need take no pains to keep this room dark, as no bees are ever allowed to get into the room, unless it be while extracting, and then our large doors are both open. To facilitate a free circulation of air all around our thin hives, we would raise the bottom tier from the floor about three inches, and to prevent bees from getting under them, and into the triangular spaces at the corners of the room when extracting, we would close these spaces with wire cloth. When we wish to extract, we would lift out enough frames from our 20 comb hive, to allow a place to shake and brush all the young bees into the bottom of the hives—the older ones being allowed to fly out at the door—and should any fail of getting in, they would be pretty sure to be on the covers of the adjoining hives or wire cloth, from which they could easily be brushed into the hive where they belong. You will see that the whole business of extracting is simply removing the combs, and passing them to your assistant, who stands at all times with the extractor right at your side. Each one of the features of the above arrangement we have tested, or seen tested, separately; and the difficulties that are to be surmounted when all are combined, we shall try to overcome in a house that we are just about putting up.

June 28th—The glass house is all removed, and in its stead we now have the Octagon house. It is a two story building that was originally made to grind grain in, with the wind-mill for a motive power. The juveniles of our family, after holding conclave, began

making very anxious inquiries in regard to what use papa was going to make of the upper story; and on being told that it was of no especial use except as a dead air space in winter, begged it for a play room; when the objection was raised that the stairs were to be taken down, Master Ernest volunteered to make a suspension stairway from the top of the north fence to one of the windows, and he is now planning this structure, with side rails, of course, for the accommodation of Blue Eyes. Our carpenter is now engaged in making the hatchway for rolling out the barrels of honey when filled, and ere we pay you another visit we expect to have it stocked with bees, and to be able to report how it works on basswood honey.

P. S.—There are two or three things about the house Apiary that we are never going to tell anybody of, and one is about having the whole inside case containing the hives, made to revolve on a pivot, with a wire cloth bottom to each hive, and tin pipes converging to the hopper in the center; and when the 20 comb hives are all full of honey, we will hitch on the—now if we should tell what, you would some of you may be get it patented, so we will just bid you adieu, without another word about our new Air Castles.

I've given up farming, and hung all my portion on bees, and crave a calm time, as I'm a young sailor on the Honey Sea. More and more I'm convinced of the superiority of the Italians. I've 8 stocks of black bees away from home not yet Italianized. The 8 gave 2½ gal. and stung everybody about the Apiary while extracting; while the Italians by their side gave nearly 2 gallons each, and only one sting in four days. I can't learn to like your metal corners for top bars, they hurt my fingers when I shake off bees. Have also discarded metal clasps for transferring combs, and use thin strips tacked across the frames lengthwise, and can then fill the frame with scraps of comb like brick work. Have made some honey boxes of 1½ inch wide cypress lath strips, boxes 5 inches high, 6 wide, outside measure; eleven sections to a box, with strip tacked on the side to hold all sections together. The ends left open for bees to work through. Four boxes fill a simplicity hive; can stop the ends when taken out. I much regret cutting entrances in the hive instead of the bottom board, as I discover that there is a great difference in extracting, for I can then lift off all the bees and set the empty box on the stand and shake the bees into it, so as never to have the same bees to shake off more than once. Success to the wind mill. W. F. STANDEER, Dry Grove, Miss.

The corners you used were probably made with our first set of dies, and were rough and sharp; by grasping the frame by the part where the tin is united to the wood, you can avoid this trouble. If you have the amount of propolis we do, you certainly will not wish to go back to prying frames loose. Use the strips, of course, when fastening many little bits into frames, but most box hives will furnish combs that the clasps will hold perfectly well. We have practiced lifting the hive off the stand, and putting the combs into a new one as fast as extracted, but rather prefer lifting all the combs out of the hive before shaking off any bees, and then putting them back only as fast as extracted. Mr. Dean has a rack to hold the combs, made of very thin, light pine, and supported on legs that bring it up high enough to avoid stooping. At first the bees are brushed off hastily, then in the extracting room the young bees are every one brushed back into the box, and when the extracted combs are ready to carry back to the hive, these young bees are all found clustered on them.

BITS OF GOSSIP.

In speaking of the Lamp Nursery on page 91, the types provokingly say a "nearly hatched" Queen, when we meant a *newly* hatched one. We don't advise meddling with Queens until they *are* hatched, or at least have commenced to gnaw out. On page 96 read *Nepata Glechoma* instead of *Glechorna*.

OUR Queen cages are specially adapted to sending Queens long distances, are easily opened and closed, and require no tacks or paper wads to do it. Another thing; the cage opens so that you can get at the Queen without any guess work, and there are no corners for her to wedge herself into. Price, 12c by mail.

WE have commenced manufacturing a Honey Gate; this differs from the ordinary Molasses Gate, in having a tinned surface all ready to solder into the can, instead of the ordinary screw thread out in them. The upper part of the gate, where it projects inside the can, is left open, to facilitate the exit of the honey. In ordering, please specify whether you want them to put into wood, or to solder into metal cans.

IN answer to several enquiries, we reply that we have no difficulty at all with our machines in extracting from new combs partly built; even if they are attached only to the top bar, and we think a new swarm does all the better for having their combs emptied every other day, when the honey is coming in fast. So far as we can see, it does not interfere with comb building at all, and very much facilitates brood rearing.

THE suspended hive had been extracted, and two nearly empty frames were put in the middle of the hive just 40 hours before they swarmed; two days afterward we looked them over and found no trace of Queen cells. Very likely the hot sun had something to do with the swarming, as the tree that usually shades them has partially died. The hand on the dial went suddenly backward *eight lbs.* when they went out. They are now rejoicing in an abundance of room in the Quinby hive.

WE mail GLEANINGS in time for each number to reach you by the first of the month, and if it fails to do so, please don't think it advisable to write unkind letters to us. We take great pride in handing you each number, and watch the mails nervously for a week after, to hear how well we have succeeded in pleasing you; we would not for any thing have any of you miss a number, yet not a month passes, without quite a number of complaints. After investigating, we find by far the larger number of complaints are caused by some other person of the same or nearly the same name taking them out of the office by mistake. Please ask your P. M. if such may not be the case, before writing us. If not, drop us a card, and we will cheerfully send any number that you have not received.

It may be there are valuable features found in the 12 or 18 dollar Extractors, not found in our own \$10.00 ones, but if such is the case, we are unable to appreciate them. We have added every improvement suggested that we thought would prove valuable, all things considered, and yet we find no great difficulty in furnishing them all crated and ready to ship, for the prices named. Any one who has carefully studied the matter will see that to make a machine capable of revolving four combs instead of two, will require an increase in size and weight, without very materially aiding in rapidity of work, among the masses. Reversing the combs inside the can, making the inside frame three cornered, running the machine by gear-

ing or belts placed under the bottom, etc., etc., have all had their advocates, but we think have generally been, after a time, discarded like the revolving cans. Our friends can rest assured, that we shall spare no pains in promptly adopting any real improvement that may come up. Please do tell the dimensions of the frame or frames you use, in ordering.

FOR a two story hive, we decidedly prefer the dollar simplicity arrangement to any of the more expensive hives. You can use as nice lumber as you prefer, and can keep them well painted, but so far as adding wire cloth covered holes, strips and the various patented "cog wheel" arrangements, we should very quickly take the plain, smooth boxes, even if offered at the same price as the others. The entrance we find particularly convenient; during very hot weather, it inclined to cluster out, any amount of ventilation can be given in an instant, and without any tinkering with blocks all covered with gum. When the entrance is to be contracted, it is just as quickly done without confusing the bees by an extra entrance. The cracks left at the back end when the hive is thus pushed forward do no harm, in practice, for the bees of a good colony very soon stop them with propolis.

WE are frequently asked why our honey knives are \$1.00, when good ones are offered for 50c. each. It is true that a honey knife will answer about as well for uncapping when made with a blade about half the length of ours, and it will also *work* as well put hastily into a cheap wooden handle, as if put into one made of solid ebony nicely finished, like our own. Do you know that you often take better care of a smooth nicely finished tool, than you do of a rough cheap one? Again, very often during the extracting season, you will need a thin bladed knife long enough to reach clear down to the bottom of the hive; this ours will do, and it is made so thin, and of such fine steel, that it will spring into a straight bladed knife with slight pressure, and without injury. Crooked pointed knives, it seems to us, are a great blunder, and we have tried in vain to use one; a knife like ours, that is sharp on both edges, and also on its rounded point, offers every facility, we think, for uncapping all sunken places in the combs.

OUR MEDLEY.

DEAR NOVICE:—Three cheers for Novice, Hip! Hip! Hurrah! and what's all this fuss about? Why, don't you know? Last night we got the "Medley," and we sailed our old hat so high that, sure as you live, it's up there yet. There must have been some great attraction in it, for when I went to the post office, the postmaster and mistress had it undone and were looking at it with all the eyes they had, and trying to borrow some more. I'd like to tell you what I think of it, but I *can't*, only it's just *splendid*. It is pronounced here the best got up Medley we have ever seen. Methinks I see some of "P. G.'s" handiwork in the arrangement of the pictures, and I think it's too bad we couldn't have her Photo, and Anna Saunders, too; she sent you her picture, and if you did not get it we'll have to lay it to Uncle Sam. I have looked at the faces for hours, till my eyes ached, and I haven't even thought of getting tired of it yet.

Now, Novice, why can't we have another Medley, i. e., one of the hives, extractors, etc., in use? I'm sure it would be almost as good as the one of the beekeepers themselves. I wonder if we can't make it worth your while to try it? Am willing to do and pay my share towards it. What say you friends, shall we set Novice and Blue Eyes to work again?

Mr. Chairman, I move that the beekeepers of America give friend Novice and his assistants a vote of thanks for getting up his splendid Medley of beekeepers. Yours, Truly,

WILL M. KELLOGG, Oneida, Knox Co., Ill. June 12, '75.

DEAR NOVICE:—Medley just received—am delighted with it—never spent, nor never expect to spend \$1.00 for any thing that can give me more pleasure than it does. I shall never grow tired of studying the many faces it contains. Most of which I am glad to say, look honest and truthful. But it is a mystery to me how you can get up such a picture, and prepare it for mailing, and pay postage, all for \$1.00. Should like to name the ones whose looks I like best, but there are too many.

Respects to Mrs. N., and P. G. love to little Blue Eyes, and happiness and prosperity to all.

As ever, ALFRED McMAINS.
Chariton, Iowa, June 25th, '75.

THE METAL CORNERS.

HOW TO MAKE THE FRAMES.

AS metal cornered frames are now coming quite extensively into use, it may not be amiss to consider how best they are to be made. Our frames were first made of strips of straight grained pine, only $\frac{1}{8}$ of an inch in thickness, and it is surprising to see how well such combs have stood. On one occasion a number of these heavily filled with honey fell from the top of a barrel, yet not a corner was injured, and not a comb broken; these were Gallup frames, however, only $11\frac{1}{4} \times 11\frac{1}{4}$. For the Langstroth frames we now make the top bar about 10-32, and all the rest of the frame 7-32, the ends of the top bars are also tapered down to 7-32 where the top corners go on, as this is about the thickness of stuff that the corners are intended for. Standard, American, and Gallup frames are all made of 7-32 stuff throughout. The Quinby size may have a $\frac{3}{8}$ top bar, but the bottom bars might all be not more than $\frac{1}{8}$, were it not that the frames may be sometimes used for transferring, and that the weight of the combs would sag the bottom bar, which is a very bad feature, if we wish to work closely and avoid killing bees. The top bars would not require so much wood were it not that honey boxes are sometimes placed on them, and it is advisable to be on the safe side. When we depend entirely on the use of the extractor, we would prefer a space of half an inch between the ends of the frames; but for box honey, small bits of comb will be built in this space, more than will be the case when $\frac{3}{8}$ only is allowed. It requires a *very* careful operator to work fast, and avoid pinching bees, when only $\frac{1}{4}$ or $\frac{3}{8}$ inch is allowed. At one time last season we were much in favor of a hive made of sections, to hold 2, 4, 6, 8, or 10 combs, but we now feel much less faith in the policy of tolerating 2 or 4 comb hives in the Apiary at any season, and much as such an arrangement might be desired, the inconveniences are too great, we think, to have them come into use. Putting in a division board is much simpler, and will, we think, answer nearly as well. It is true the closed end Quinby frame makes this very easy, but we have received so many adverse reports since the time we were disposed to favor them, that we think very few bee-keepers will ever submit to be annoyed by them, unless they work their Apiary mainly for box honey.

The two following cuts may assist some in putting on the metal corners:



Figure 1 represents the points ready to be closed down and clinched into the wood, which is represented by the dotted lines A, A'. Fig. 2 shows a point badly clinched at B, and one perfectly driven down at C. The line D shows the direction in which the finishing blow of the hammer is to be given; in fact this blow should sink the metal slightly into the corner of the wood, drawing it up tight at the side C, and on no account letting it bulge

out as at B, nor allowing the point to curl up. A light, properly made hammer and a little practice will enable anyone to make every point like C. Should you get one done badly, you can with a pair of plyers straighten it out and *make* it go right. The objection has frequently been made that this takes more time than to nail them; even if this were so, we are enabled to employ girls or other cheap help (we beg pardon ladies, but we never yet saw a community that did not furnish more or less females, who would be glad to get some such light work,) who could not possibly nail good frames; then after they are done, their superior strength and lightness compared with nailed frames, fully makes up the difference in price. We will send you a sample frame by mail, just as we would have it for 15c. (12c. Standard size) including sample of rabbet and transferring clasp and you can test it by the side of your own frame in your hives. If the nailed ones do not seem awkward after using it, you, of course, need not invest any further. See our price list for further particulars.

The metal corners were patented June 18th, 1872. This was done only to protect our business of manufacturing them. No rights have ever been offered for sale and probably never will be.

WOULD it not be a good idea in publishing "testimonials," to give the adverse letters received, as well as those from our "pleased" customers? Undoubtedly this plan would give the public a view of both sides of the question. We haven't had a dissatisfied letter yet, in regard to the Medley, and those received in regard to our hives and extractors, we have generally published. Perhaps the nearest to a complaint about the corners, is given in this supplement; if our friend who wrote it has no other cause of complaint, we think the objection he gives has been already remedied. As we have said before, we value honest criticism, and hope our friends will "talk out" when they don't feel satisfied.

PLEASE bear in mind that mistakes are always liable with all the care that can possibly be taken. A case is at hand where an Extractor was damaged by the R. R. Co., and had to be returned to us for repairs; now although we sent a new one in its place with all possible despatch, our customer never entertained the idea, it would seem, that the delay was from any fault but our own. In case of a delay, tell us briefly when and what you ordered, and whether you have received any thing from us to indicate your order reached us. Some goods were recently burned in a warehouse; this caused *us* trouble, the R. R. Co. trouble, and our customers trouble, and although all responsibility on our part had ceased, we preferred to duplicate the burned goods, and run the risk of getting our pay of the R. R. Co., *sometime*.

COME SOUTH!

APIARY FOR SALE IN NEW ORLEANS.

125 COLONIES ITALIAN AND HYBRID BEES, in Frame Hives, will be sold at a bargain on account of departure. For raising early Queens or honey, for home, Northern or Western markets, this is a good opportunity for an enterprising man to make a comfortable livelihood with less than \$500 capital. Address,

JNO. J. RIVERA, New Orleans, La.

BEWARE how you attempt extracting *immediately* after a heavy rain. Bees are peaceable only when they are intent on the honey that is coming in, and a heavy shower often washes out the nectar from the flowers to such an extent that they remain idle until more can be secreted, a period of several hours or more. New beginners frequently get stung disastrously before they learn why their bees so suddenly change their disposition, and sometimes become disgusted with the extractor, just because they choose an improper time to do the work.

THE Medley is now ready and, we believe, gives the best of satisfaction wherever received. We advertised to make it \$x10, but so many more Photos were sent in than we expected, that we decided to make it 10x14, and this without changing the price, although the new postal law compels us to pay from 12 to 15c. on each copy. As the work costs us several hundred dollars, we hope it may have a wide circulation. The two large pictures of Mr. Langstroth and Mr. Quinby should be worth the dollar alone, to say nothing of the rest of the group. We think it contains about 150 pictures, but they are like the little girl's chickens, whenever we undertake it, some of them "won't be counted."

WE like to feel sometimes that our work is all done up—that every order is filled, every letter answered, and in short—all duties faithfully discharged. Do not you at times feel the same, dear reader? We are sure at least a few of our careful house-keepers do. Now a great part of our duties is to open and answer letters, and we have found by experience, that the only way is to open one letter, and finish all that is to be done to it, before opening the next; that is, so far as may be, for it may have to be deposited at once into a pigeon hole that we have labeled "Await Further Orders;" or if the goods called for are by some means delayed, it is put into one marked "Ship as Soon as Possible." In order to get through with all the letters received each day, we are obliged to push them along, as it were, and but few minutes on an average can be spared to each one; and in order to do justice to you all, many of our replies must be so brief as to seem almost rude. Write to us just as often as you like, and we are real glad to get real long letters, if you only will not expect us to reply at equal length. It doesn't use up brain and muscle to *read* friendly letters, but it assuredly does in our case, to *write* them.

If you want to get nice *worker* comb, don't put an empty frame in the middle of a strong colony during a good yield of honey. Get your comb built in moderate colonies, or remove all the combs but one or two; see the articles in back No's. from Dean and Oatman. This rule, however, has exceptions, and you can try a colony and see what combs they will build; the progeny of a certain Queen will, so long as she lives, have peculiarities. One hive always inclines to build drone comb, another worker, another crooked comb, etc., and by studying them you can take advantage of this. Complete, strait worker combs are better than cash in the bank, for when you once get a complete set, you can rear just as few drones as you choose. A few days ago we found a frame that had been put into one of the hives by mistake; it contained sealed drone brood from the top to the bottom bar. How much do you suppose the colony lost by not having had an entire worker comb in place of it? How many hives have *you* at this minute containing drone brood that is worse than useless? It is true you can pare their heads off, but would it not have been much better economy to have had it worker brood instead?

IN using the Lamp Nursery for rearing dollar Queens, remove every Queen as soon as she commences to lay, and put a nearly hatched Queen in her place at once; occasionally one will be found missing in this case, but our "machine," if given a comb of cells every 3 days, will supply us with new Queens so cheaply that the loss of one is a very small matter; in fact the greatest trouble is to find a place for them all. Worms will be very apt to be found in the nursery, and we know of no better way at present, than to pick them out: if this be done daily, and if each comb is returned to the hive as soon as all the Queen cells are hatched, it will be a light task.

GALLUP.

DEAR NOVICE:—Perhaps all the bee-keepers think that Gallup is dead by this time, but he still lives. I have been compelled to go into a new business and that, too, against my own wishes. Since the first of November last, I have been home but two weeks, and since the 17th of Jan. I have been home only two nights; and in order to be with my family, I have rented my farm, purchased and moved into town, and gone into the Water-cure or Hydro-pathic practice. I have not solicited a single case, and yet I have had all I could attend to, and have had universal success. I have taken several hopeless cases, or cases pronounced hopeless by the regular physicians, and cured them entirely. Have let the bees to J. W. Lindley, and hung out my shingle and gone into the business. Have had no time to write to my most intimate friends until this morning.

E. GALLUP, Osage, Iowa. June 2d, 1875.

Can we not all join in kind wishes to our old friend? Whether it be among bees, or in his new avocation, or in whatever field it shall seem that he may do most good among his fellows, may success attend his labors. And may we not hope that very shortly he will conclude to keep a few bees again, even if he is in town? We are sure that an occasional article from the pen of *Doctor Gallup* would be as warmly welcomed, as in the days when he used to give us his side splitting broadsides, after his day's labor in rail splitting on the farm.

FERTILE WORKERS.

DO, please, tell me in next GLEANINGS how to get rid of a "fertile worker." On the 10th of April, I accidentally crushed one of my best Queens, in removing a card of brood for inspection. In due time I found the bees supplied with a fine looking virgin Queen, which was lost in her unsuccessful attempts to meet a drone at that season of the year. I inserted brood at various times. Procured a fine fertile Queen, destroyed all Queen cells, and inserted her properly caged. At the expiration of four days I liberated the Queen. Next day the bees brought out her corpse. I then inserted two capped Queen cells. These were hatched and destroyed. Not until then were my suspicions aroused. Close inspection revealed eggs at irregular spaces, and in various numbers in worker cells. From ten to fifteen eggs were found in each one of the old Queen cells.

In this condition, Queen cells started elsewhere and inserted, were cared for and hatched, and then the Queens were killed. In this dilemma, I divided the colony into four nuclei. Three of these are prospering; but the fourth, still contains the ambitious worker; and the most careful inspection does not lead to her detection. What shall I do?

G. E. CORBIN, St. Johns, Mich. June 16th, '75.

In the first place, no fertile worker should ever be allowed in an Apiary; you should consider it something to be ashamed of, and it will never make its appearance, if every Queenless colony is given a comb of eggs every 4 or 5 days. If you have been so careless, don't fuss with a little brood, but give the poor fellows 3 or 4 combs full at once, and keep them so well supplied with *good* eggs that the fertile worker will lose her occupation. It will always prove a remedy.

FORCING BEES AS WE DO VEGETABLES.

WHEN we mentioned the matter of making use of glass sash, etc., in Vol. I, we had no idea of letting the bees fly under the glass as on the Bidwell plan, and although so many failures are reported with the sashes, it is quite likely that when properly used, they may serve a very good purpose in April and May. We insert the following:—

About the middle of last November I put into winter quarters (a dry cellar under my house) 49 swarms of bees. To-day I have in good condition 44 swarms. I lost one by neglect, (starving,) one by "fooling" with it, (I forced it too much in my forcing house, i. e. I forced it out of existence,) two left their hives and took up their quarters with their neighbors, one was robbed, one "lit out," and I have purchased one. My bees have used about 125 lbs. of rye flour this spring. The first week in May they worked as briskly on it as at any other time, carrying into their hives during that week, about 30 lbs. My experience shows that the forcing house is good if not used to excess. During the winter, if a swarm became uneasy, I put it into the forcing house, removed the quilt, let the bees have a "fly," and at evening returned it to the cellar. I experimented with 20 different swarms in this way, on as many bright sunny days, sometimes the thermometer outside being below zero, with very beneficial results. If I had not done it, I think I should have have lost several more.

Norwalk, Ohio, May 25th, 1875.

In the above, the "fly" may have been beneficial, but we cannot think the evidence very positive. In the next there seems to be no chance to doubt that the direct rays of the sun were the cause of making the poorest stock the best.

FRIEND NOVICE:—This past winter and spring have been very hard on bees. Some have lost all; one man had 25 colonies in box hives, another 16, both lost all; another, 7; lost all but one. I had 29 in the fall that were in pretty fair condition. I fed in fall to induce breeding, so as to have young bees to winter. I think that was one reason so many hives perished during the past winter and spring, (bees too old, and constantly diminishing in numbers.) I transferred seven very weak colonies in March. Some of them had only a pint of bees; saved all of them, and they are good strong colonies now. I placed a sash of glass over one of them to see what I could do in the way of forcing, and I succeeded finely. Every day that the sun shone out warm, I removed most of the old clothes from the hive, and let the accumulated warmth of the sun's rays through the glass warm the bees. At night or in the evening I would put back the old clothes and carpet, and weight down with a board and rock, so as to retain the warmth. The result was, that the pint of bees was the first one of forty colonies to build new comb. Of course I was feeding stimulatingly all this time. I have some young Italian Queens, raised this season, that are laying nicely, one colony sent off a large swarm the last day of May, during the flow of honey from the gum and poplar trees; but we have but few of these here, our main dependence is white clover.

J. B. RARR, Orrville, O. June 8th, 1875.

In the above case, it seems that warming the bees did not induce them to fly out and get lost, after all; and although much was said about it at the time of our manure experiment, we do not think such was the case at all. That the manure kept the sun from them, after it had ceased to ferment, we think was the case; but that warming up a hive on its summer stand will induce the bees to go out during bad weather, we think an error. On page 69, Vol. 2, is a letter from M. Miller, and his sudden death is noted in the same No. This gentleman had several colonies arranged in a bank cellar, so they could fly from the outside; as an experiment, he arranged an underground fine directly under some of the hives, in such a way as to warm them up gradually by means

of fire heat. Mr. Pierson, of Ghent, O., who saw the experiment, states that he warmed up the hives until the bees crowded out at the entrance, as they do during a hot day, but that no bees took wing or got lost, and when their hives got cool, they went back quietly. After friend M's death, his family wrote us to know what they should do with their great crop of clover honey, and finally a son made us a call. We questioned him about the experiment, and although he said he had no preference for the bee business, we gathered that the most of their great crop had been obtained from the few hives that his father "built a fire under." Such an arrangement would hardly be advisable on the ground of economy, yet the principle brought to light is important. During our recent visit to Mr. Coc's house Apiary, we saw a number of two or three comb nuclei, that seemed to be flourishing so finely despite the cold damp weather, that we inquired if he had used no artificial heat. He replied, only so much as was afforded by placing in the room a can of hot water, and so perfect are the walls, doors, windows, etc., that it kept the apartment at a temperature of, we think, 60° or 70° per 24 hours or more. The walls are made with a series of dead air spaces, and would without doubt, besides economizing the heat from so many colonies, preserve any kind of artificial heat for a long time.

OBITUARY NOTICES.

A GREAT calamity has befallen the beekeepers of our land in the very sudden death of Mr. M. Quinby. Aside from the books he has written, he has been an almost constant contributor for years to the *Am. Agriculturist*, and his article in the last June No., would give no indication of the loss of the great mental activity he has always exhibited through a busy and useful life.

He was born in 1810, in Westchester Co., N. Y., and came to Montgomery Co., in 1853. He died the 26th of May, 1875, probably of apoplexy. May we all, when we come to our dying beds, have cause to feel that our lives have been as useful to our fellow men, as has that of our departed friend, M. QUINBY; and should no public monument ever be erected to his worth, his memory will stand for ever in the hearts of his countrymen.

The following is at hand in regard to the death of one of our number, whose report appeared on page 69, May No., and was afterward copied in the *New Orleans Home Journal*.

Emmett Fuller, who made so flattering a report of his Apicultural success last season, in the May No. of *GLEANINGS*, died at the age of 22 years, on the 14th inst. He was a member of the "graduating class" of the Michigan State Agricultural College. His funeral was attended by forty of his class-mates and a large concourse of friends and neighbors. Priest Abbott, of the College, conducted the religious exercises. The deceased was universally and highly esteemed by his class-mates and acquaintances, both in the College and at home. He resided with his friends, near Mason, (about sixteen miles from the College,) when he died.

G. E. CORBIN, St. Johns, Mich.

OUR neighbor Mr. Clark, who publishes the *Young Folks Gem*, and who has a card in this No., we are happy to say is a thorough gentleman, and one equal to the task of conducting his large business.

Heads of Grain, FROM DIFFERENT FIELDS.

BEES in splendid condition—never better, I think, at the time of year. Have dwindled up until the hives are almost running over with bees. Some of them, in fact, have run over, as they commenced swarming May 27th, notwithstanding I had destroyed the Queen cells to prevent it. Shall have to lay the blame for their acting so to over eleven bushels of rye and out flour they have carried in, and a barrel of sugar made into syrup, that I have been administering in small doses, daily, since March 1st.

JAMES BOLIN, West Lodi, O.

May your shadow never grow less, friend B., and may you be able teach the rising generations, to keep bees as successfully as you do.

A. J. Fisher, of East Liverpool, O., asks what he shall do with the large amounts of pollen that his bees are filling the combs with, he fears to such an extent that it will leave the Queen no room for eggs. He can't exchange combs, for his hives are *all* in the same predicament. Now it is very difficult for us to believe that his bees, or any others, ever collect more pollen than they need. We have seen the same state of affairs, yet in looking again after several stormy days have intervened we found the pollen all or nearly all used up. This of course is in hives having plenty of brood and brisk Italian Queens. Get an imported Queen, friend F., and if her daughters will not furnish a family that will empty the combs of pollen in short metre, your locality is different from ours.

Can I Italianize my bees when there are more than one hundred colonies within a mile of me? If so I would like to have the name of some Queen raiser as near me as possible so that I can get a Queen or two as early as possible.

"A Green Texian."

You can receive nearly if not quite all the benefit of the Italians as honey producers, even if there be 100 black stocks in the same *Apiary*, if you get all eggs or larvæ for Queen rearing, from a Queen of known purity. And here again we feel sure that we shall do our friends a service by advising an *imported* one. A tested daughter of an imported, would be the next best thing, and if it were not for the time taken, we would advise buying half a dozen dollar Queens from imported stock and selecting one from these. We can do no better than to refer to those who advertise in GLEANINGS.

You say don't put new swarms into *empty* Simplicity hives. How else can we do? We have no combs to put into frames to start with unless it be a bit fastened in. Do you have no guides to space frames accurately? or do you depend on the eye? They slip so very easily when empty I should suppose a contrivance if but a bit of thin wood with slots cut in would be an advantage.

J. W. PORTER, Charlottesville, Va. June 3rd, '75.

It may be necessary to put your first swarm into an empty hive, but after you have got *one* in the movable comb hive you have decided to use, you can always spare the next colony at least *one* comb for a pattern, and if this one comb contains unsealed larvæ, you can feel sure that your colony will not desert. A swarm can be put into an empty Simplicity as well as any other or perhaps better, for by pushing the hive well forward over the bottom board, you can give them the very best chance to get in, in fact you can after shaking them in front of it, slide it directly over them, and

thus hive them very quickly. You can with very little practice, set the frames at equal distances, much quicker than you possibly could by the aid of any stick or gauge. Just before you shake the colony in front of it, open it and fix the combs all nicely in place, then tuck the quilt down so that *not a bee* can get above it, and shut it down. When the colony is on its permanent stand, it may be well to elevate the back end of the hive, and then again raise the quilt enough to see that the frames have not got displaced, and finally watch them daily for several days, and insist on their doing *good work*. Use all the bits of worker comb you have about, by all means.

A year ago last fall on the 18th day of November I placed seven swarms in the cellar under my dwelling house and on the first of March following I took them out sound. The past season they increased to nineteen swarms—placed them in the same cellar on the 20th November, '74—took them out on the 25th of March—all alive but one. The cellar is dry and well ventilated. I use Langstroth hives. My Swiss clover is just getting in bloom.

GEO. HEATER, Flat Rock, O. June 1st, '75.

But what is Swiss clover friend H.? please tell us more about it?

Here I am away out here in Montcalm Co., all alone so to speak, yet I have a "better half" and four pair of little "Blue eyes" and 80 roaring strong stocks of pure Italian bees to make my home jubilant. Methinks I hear some one ask, "what's the trouble then?" but wait, I will explain. Ten years ago I bought my first Italian Queen; at that time many old fogies declared that if I ever got a Queen by mail it would be a wooden one and when I told them that I had taken 500 lbs. of honey from one stock in a season, why, they gave me all sorts of abuse of course, but however the honey interest has been on the increase every year since until last season, when it became very important; much of the time passers by thought I kept a hotel by the looks of the vehicles in front of my dwelling. "Then what is the matter?" Why the bees are all dead in this part of Mich., all died the past winter and spring, and here I am working away among my little pets day after day without any body to talk bees to, and if perchance I see some person going along, they cast a careless glance over towards me and go on shaking their heads as much as to say, "doubtful business that, can't fool me again."

Wishing all a prosperous season with bees etc., I am yours fraternally, H. M. ROOF.

Carson City, Mich. June 30th, '75.

You leave us to conjecture, friend R., that your success like all the rest, is only because you have learned how, and it is a positive fact, that our old hands at the business, *are* getting the upper hand of the wintering troubles.

A file of GLEANINGS from the beginning, was a few days ago lent me by a friend, and my wife says it has stood me "on the head" about bees, as it caused a great revival on that subject.

AMOS S. COLLINS, New Orleans, La.

We trust that you may eventually get "level," and that the revival may be permanent and productive of good.

I have two Queens that are blind or crazy, they lay as many as twenty eggs in one cell; I have caught them, and set them on an empty comb to learn their duty, but it is no use, they do as before and I turned the index on the word not approved.

J. DUFFELER, Wequick, Wis. May 22nd, '75.

If the Queens do this when they have a good colony of bees, they are certainly at fault, but if they are equal to the task of depositing a great many eggs, and have only a few cells prepared and kept warm for them, they certainly should not be blamed. We have seen Queens that behaved thus in the spring, afterward make good strong colonies.

The last *A. B. J.* states that the machine for making the corners cost \$2.50. Please inform me if it is so, or if not, the actual cost.

The machinery for making the corners complete costs from 3 to \$500.00, and as one set of machines will supply all that will probably be wanted, we prefer to make them ourselves, and thus insure accuracy and uniformity. We allow any one to make them for *their own use*, if they prefer, but as a general thing it will be found cheapest to use them made with accurate machinery.

You misunderstood me on page 70. The double width hives were strong enough to cover all the frames and fill all the boxes during the day and also by night in ordinary seasons. Last year the nights were very cold—not a single hot one for the season. So much so, that the bees contracted their cluster as they do in the winter. Single story common hives that stored box honey, clustered out by day and by night would fill boxes and all. Bees were not set out here this year till 25th of April.

E. C. NEWELL, Brookfield, N. H.

We are to gather then, friend N., that the long hives are not good for box honey. This may be the case, but would not a division board fix the difficulty?

What do you think the simplest and best, to use for division boards? Mice sometimes give trouble in the bee-house in winter: would wire cloth under or over the quilts prevent their doing injury?

Is a wax extractor worth making when the number of hives does not exceed twenty-five? Will it not take one year's wax to pay for it?

W. P. T., Fitzroy Harbor, Ont., Can., June 7th, '75.

We believe wood is generally used for division boards, although it is quite apt to warp and shrink. We have used tin, quite satisfactorily, and with the Simplicity hives it is an easy matter to saw a groove in both front and back for these sheets to slide in; this allows the bees to get mixed at the entrance, however, and hence is objectionable when dividing a part of the bees for Queen rearing. For the latter purpose, hives with the entrance at the side of the combs like the Standard are preferable. For a division board to contract the brood apartment, any thing will do that prevents the Queen from going to other combs; but for rearing extra Queens the partition must be absolutely tight. It is true, that wire cloth division boards have succeeded occasionally, for a time, but when the bees can communicate with each other, the Queens seem to be neglected, sooner or later. As wood is undoubtedly the cheaper material, we suppose it will be most generally used. Our neighbor Shaw uses bits of lath, fastened close together by pieces nailed across each end; these neither warp nor shrink. Those living near shingle machines, can have very light and neat division boards made at a small expense.

We would keep the mice out of the house; if this be impossible, perhaps you will have to put coarse wire cloth over both entrance and quilt. There is no excuse for making a bee house so badly that mice can get in, and we might almost say the same of a cellar.

We find the wax extractor so convenient for putting in cappings, that we should have one if we had but 10 colonies. Very likely it *would* take the wax of one season to pay for it, but if it did even *more*, would it not be called a good investment?

FRIEND ROOT:—When Mr. Langstroth was visiting you I wrote me for a photo of Mr. Otis, I presume he wanted it for your Medley. When his request came I was in California, and I knew nothing of it

until my return about a week ago. I have an excellent photo of friend Otis, but presume it is now too late for your use.

I was in Southern California about a month visiting the Bee ranches. The Harrison hives are going out of use. The Langstroth hives are preferred.

M. M. BALDRIDGE, St. Charles, Ills. May 29, '75.

Several photo's came in just too late, and among them we regret to say, were Mrs. L. Harrison, and Miss Anna Saunders. We were quite sorry to omit Mr. Otis, for although our acquaintance with him was very brief, we are inclined to think with Mr. L., that he is a man, who has been unjustly persecuted.

The Medley is here. We have many pictures—none so highly prized as this. I think you deserve the thanks of the bee-keeping fraternity.

There is one unpleasant thought when I look on the faces of my bee-keeping brothers—that is, their losses in wintering. If they could only consent to come South, this dread would at once be ended. In Tennessee, with intelligent management the loss of bees is almost unknown.

W. P. MOORE, Richland Station, Tenn. June 14, '75.

We think you are mistaken, friend M. We have reports every season from localities both North and South, where bees never die unless from starvation. But the malady seems steadily spreading, and we bid you all be prepared to meet it, sooner or later. The very best precaution, we think, is extra strong stocks, that if the spring dwindling *does* overtake them, they may be able to weather it through. Again, in places, where bees have for several seasons died off badly, we hear of their wintering without trouble this past winter. The point is to have bees enough to weather through these severe pulls when they come; if they don't come, heavy stocks are a very good thing to have in the spring when there is no dwindling. We too, feel a deep sympathy for our many "bee losers;"

W. F. Standefer, of Dry Grove, Miss., sends us three samples of honey by mail. That from spring flowers, which is much the lightest in color, has a beautiful peculiar flavor, and should bring at least as good a price as our white clover, viz., about 16c. by the barrel, or 20c. at retail. The others are much like our Northern fall honey, although perhaps a little lighter, and would command from 3 to 5c. less. The figures, of course, do not refer to that sold in cities, put up in fancy decanters, etc., for from 25 to 50c. per lb. These latter prices must go down, we think, and the former ones be relied upon for the great bulk of our honey.

Where can Tennessee honey find the best market north of the Ohio, and in what sized packages, shape etc., would it be most salable? Extracted honey I mean.

W. H. P. JONES, Nashville, Tenn.

We can do no better than to refer to the parties mentioned last season; and if they do not wish to buy at present, attend to your home market. See that every dealer within 10 miles, keeps a nice article the year round, in a convenient shape for sale. A point occurs to us right here; the Editor of the *Fruit Recorder* tells his readers that their greatest profits are to be made during *poor seasons*, for he expects *them* to be able to get a fair crop in spite of drouth, insects, etc., whereas, the farmers, and unskilled cultivators will then fail, and this gives them good, remunerative prices. When the season is so favorable that every thing is a drug in the market, the prices received hardly pay expenses. Now, is there not a lesson for

us here? If no bees died in winter, perhaps honey would not bring 5c. per lb., and good colonies might be bought for a dollar or two. As it is now, our successful neighbors are refusing to sell when offered \$15.00 per colony, and honey, that they could produce at 8c. or less, brings 16c. It would be rather a hard piece of advice, to say, "let those fail who are not smart enough to winter their bees; it will make it all the better for us, and we will sell them more to start with at \$15.00 or \$20.00 per colony;" but, dear friends, is it not working somewhat that way? Which class are you going to belong to?

I have taken 2000 lbs. honey to date, and prospect good for four times that amount.

J. F. MONTGOMERY, Lincoln, Tenn. May 26th, '75.

I keep a few swarms of bees. Last year I pumped 2400 lbs. of honey from 15 swarms, increased them to 42, and got 400 new combs made. They wintered well, have lost some this spring. Some have lost all they had. They are doing well now.

DR. M. L. BARNES, Hartford, Wis. May 27th, '75.

Weather very cold and backward. Bees rejoicing however, that there was a "Novice" to invent the Universal feeder.

Yours in all sweetness. G. C. MILLER.
Mt. Hanley, Annapolis Co., N. S. May 20th, '75.

On the supposition that all the frames in the lower story are well filled with brood, would it not be a good plan to give each swarm, just before the white clover harvest, enough sugar syrup to fill up the edges of such combs, thus forcing the bees to store all their honey in the upper story? Especially would not this plan work well for those who wish to secure box honey? I expect to try it with a few swarms. With best wishes I remain

S. F. NEWMAN, Norwalk, O.

We think the plan would be "tip-top" without a doubt. Since clover honey seems destined to command a better price than any other, not even excepting the California Sage, it will behoove us to see how we may best economize it all. Sugar is just as good for brood rearing, and probably a little better for wintering. All that remains to be seen to, is that they do not carry this syrup above. If they are all pretty liberally fed just before the clover season opens, and before the upper stories are put on (or the surplus combs at the sides, which amount to the same thing), we think it will be all clover honey above.

I had a splendid swarm of Italians yesterday—May 23rd—good for Michigan.

W. COMFORT, Tecumseh, Mich.

One day last week I had 3 swarms from box hives that alighted on the same tree and limb, at a few minutes of each other. Didn't know what to do with them, had no hive to hold them, so I got a cracker barrel, and knocked the whole mess down, (for it was a mess for certain,) and they are working apparently all right.

J. B. COBB, Woodstown, N. J. June 16th, '75.

But you should not do so friend C., it is a very easy matter to separate swarms. If you have empty combs, all the better, if not, just put the bees into three hives as nearly equally divided as you can, and in working with them, you will very soon find the Queens by at least some of them being covered with a ball of bees; examine them every hour or two, until you do find them. With extra combs, the Queens can be as readily found, as if in an ordinary colony. It is true your mammoth colony will gather a great amount of honey, if you can set them all at work to advantage, but in a short time, you will only have one ordinary stock, where you might have had three.

In reply to a remonstrance from us because Mr. L. objected to our publishing the names of those who responded to our call, he gives the following sound reasoning in a private letter.

DEAR BROTHER:—If there are any parties who feel that in sending me money they are only acknowledging some benefit received from my writings and inventions, I should not decline accepting it, but let them send it to me personally, and not to have it appear in print. Some might give, to have their names appear, (not many I suppose,)—and some might give because they might feel that it would be expected of them to give, and yet they do not want to give. I desire nothing but what comes from the heart.

L. L. LANGSTROTH, Philadelphia, Pa., May 26, '75.

We are feeding our bees yet in a trough in the yard, a patent pail full daily to 44 colonies. They take it up clean in less than an hour; not the least robbing or fighting, but they are a good deal excited, and work with a will, while it lasts, then quiet down in a few minutes, as soon as it is gone. We think it the easiest and best way to feed when it is warm enough for them to fly. The nuclei will not take enough to live on,—have to feed them in hives.

SARAH AXTELL, Roseville, Ill., June 19th, '75.

We fully agree with you, Mrs. A., and we very much doubt the utility of feeding bees when they cannot fly. To such of our readers as have long drouths yielding no pasture in the fall, we would strongly advise this out-door feeding; it is better made quite thin—sweetened water in fact,—and if you think you cannot afford it, rear dollar Queens to pay for the sugar. When bees are disposed to visit the grocers and confectioners, this will effectually keep them away, and make them as quiet and easy to handle, when in the midst of a yield of honey.

We would earnestly advise those who are taking decided positions in regard to double walled and thin walled hives, to "go slow." More reports are sent in than we can possibly publish, and while one seems to point very positively in favor of the former, the next will be as clearly in favor of the latter. The most puzzling part of it is, that in one Apiary, all those covered with boxes, packed with shavings, straw, chaff, etc., will die, while the unprotected ones, side by side, live; again, the unprotected die, and the protected live. Is it possible that those sending in reports, unconsciously, are defending some hobby of their own? Although there are some very heavy names appended to those advising chaff, walls, etc., we think the testimony taken as a whole shows clearly that such protection at least does no good, and that the same colonies would most likely have done well, any way. Can we not try to bear in mind, that if a colony does well in spite of our laborious tinkering, it is no positive proof that they were benefited thereby. The testimony in favor of frost-proof repositories, is almost unanimous, and that in favor of carrying them back during bad spring weather, almost if not quite equally so. For out door wintering, the testimony is heavy in favor of some porous covering, such as quilts or straw mats.

FRIEND NOVICE:—We have now 46 colonies to commence the season's work with; that being the same number you have, I believe. The 20th of May the majority of our stocks had brood in only two combs, occupying a space in each comb no larger than your hand, at that. We were nearly discouraged, but by the best care in our power we are building them up somewhat, although they are still far from what they should be at this season of the year. White clover and locust just opening.

G. M. DOOLITTLE, Borodino, N. Y., June 16, '75.

Last winter my brother in St. Louis, Mo., sent me a package of what was said to be Alsike clover seed, I sowed part of it in our garden and the enclosed twigs are specimens of the result. The same thing has grown along the river banks and the hill side since I was a boy, and has been a source of annoyance to the farmers, for when it gets well rooted it is very difficult to eradicate. Although it grows all around my hives and has been blossoming for a week I never saw a bee light on a flower. This does not in the least resemble any of the sorts of clover I am familiar with, and if it is really Alsike I am badly disappointed for I wish to grow a good bee pasturage.

The plant sent is *Nepata Glechorna*, familiarly known as Gill-over-the-ground. It belongs to the Cat mint family, and the leaf bears quite a resemblance to the catnip; it bears a small blue flower and forms a dense mat of vines, and is truly a bad weed. The plant in most localities bears considerable honey and several specimens have been sent us of late stating that the bees were getting honey from it in considerable quantities. In your case friend C., your clover seed was probably old, like much of that in the market, and failing to germinate the vine came up in its stead. As an illustration of its hardness we might mention that in our boyhood days, our father offered one of "us boys" a horse, if we would get the weed out of the garden—"mother" had introduced it with a lot of other "posies" some years before, she admired it on account of the pretty little blue flower. Brother never got the horse.

Very early this spring I sowed some catnip seed from Rice, of Seville, but not a seed germinated. I sent also to Indiana, for cuttings of basswood but none of them grew.

In regard to the catnip seed, Mr. Rice has informed us, that much to his astonishment, he has not succeeded in getting the seed to grow, and that he will cheerfully refund the money in all cases of like failure.

I regret I could not have had the June No. a week earlier, for I might have saved the other 4 of the 5 Queen cells formed in one of my hives. I tried Kretschmer's Queen cell protectors, but they all proved failures in my case.

BEN S. COLE, Tiltonville, Ohio.

We have no faith that any thing can be made practicable for protecting the cell when allowed to remain among the bees. The plan given in the June No., we think much the safest for beginners.

GENTS:—I thought I would write you that I had the first natural swarm from my bees on May the 24th. It is a pure Italian. Many of my stocks had become very weak but they are increasing very fast now. I never before had as many Queenless and drone layer stocks, as I have had this spring. Lost up to 78 colonies during winter and spring. Bees on an average are stronger now than they were a year ago. The hives are full of brood and will turn out lots of swarms in from 2 to 4 weeks.

ADAM GRIMM, Jefferson, Wis. May 28th, 1875.

Seventy-eight lost in 1158 would be at the rate of about seven per cent, which we call very fair for so large an Apiary. It seems to give us unfortunate ones courage, to hear that even Adam Grimm, too, has the "modern" "dwindling down," spring troubles to contend with.

I have 44 good colonies of bees from 47 last fall.

H. PALMER, Hart, Oceana Co., Mich. May 24, '75.

DEAR NOVICK:—I've got the "Medley" and what a multitude of reflections the array of faces brings up, how different they look from what our imaginations had pictured them, how odd and disappointed one feels to be thinking all this time that perhaps we

might be the best looking man in the Medley, and then to find that there are about 150 better looking ones. I might possibly except the gentleman up in the left hand corner, but then I had rather some one else would be the judge, but it is only half finished now. Why did you not get them all on? Where are Bidwell, and Alley, and Shaw, and Van Deusen, and Hoagland, and Dadant Senior? (By the way last fall I received an imported Queen from Dadant, she lays drones in worker cells. I informed Mr. Dadant of that fact and no sooner had he got wind of it, than right along came another Queen to replace her, why don't all bee men do so? if you want to be sure of your Queens, bury of Dadant.) And then where are King (but then I have Homer's picture, took it when he was here years ago selling the hive that gave so much trouble), and Winder, and Kidder, and Benedict, and Brother Flanders, "W. A. Flanders A. M." that used to make things so lively for us at the State fairs? Some 8 or 10 years ago he was at State fair at Harrisburg with his hat full of bees, one stung him on the head. I pulled the sting out for him, and at his request rubbed on some extract of "Quinbee," he said it was good, and straightway sold a dozen bottles; as a benefactor, he should have put in an appearance certainly.

THEOD. M. MOLTZ, West Fairview, Pa. June 9, '75.

We should have been very glad to have included the pictures of those you have mentioned friend M., but they would not send them. We appealed to them for a period of over six months, and that we might not be accused of partiality, declared our intention of including every one sent us.

Speaking of Flander's Bee Charm reminds us an account Mr. L. gave of one Twining, who came to him to communicate that he had made the grand discovery that Queen bees put into Anise, etc., would communicate their "taint" to the liquid in such a way as to allow bees, Queens etc., to be handled with impunity when the fingers were moistened with it. Mr. L., knowing from experience how bees will gather about any spot where a Queen has been, gave the matter a trial, and behold, as Twining said, hives could be opened without smoke, Queens let loose any where, and two Queens were even "swapped" from one hive to the other, and yet both kept right along laying as if nothing had happened. Straightway the wonderful discovery was communicated to Dr. Kirtland, who was so incredulous, that he desired Twining to make a trial of it on some vicious hybrids. Twining full of faith pries up the honey board and gives them a puff of his Anise prepared breath, but to his great astonishment the "charm" was broken, and the hybrids stung him unmercifully. Another attempt was made with Queens, but they were killed "instantly," and the great revolution fell to the ground with all except the unscrupulous Flanders who continued to peddle his bottles of "bee charm" as long as he could find "a fool with money" or begging pardon, perhaps we should say until the *American Bee Journal* shed its civilizing influence over "bee-dom."

Moral:—During the height of the clover or linden harvest you can often unite colonies, exchange and introduce Queens, without any caging whatever, and with scarcely a failure; in fact there are times, when it seems as if whole Apiaries forget to take any notice whatever, of strange Queens or strange bees, in their infatuation to accumulate the treasures flowing so bountifully from the blossoms. When Queens are not of much value we often let them loose at once on a comb of bees, being ready to rescue them the very instant they seem in danger. If you have smoke handy there is but little risk.

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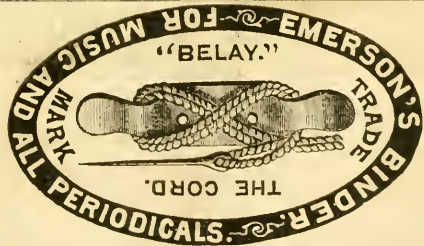
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CLEANINGS IN **BEE CULTURE**

or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees. Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO.

BY A. I. ROOT.

Vol. III

August, 1875.

No. 8

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

*[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]*

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Southern Farmer,

Scientific American.

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MANUFACTURED

4 Inches (or less) wide,

And 16 Inches (or less) long,

Cells one-sixteenth inch deep.

One Dollar per Pound.

MONEY MUST ACCOMPANY ORDERS.

JOHN LONG,

Box 6, Station C,

NEW YORK CITY.

Artificial Honey Comb Foundations.

I read in works on Bee Culture, the following:

"To form one pound of wax, twenty pounds of honey are required."—*Liebig*.

"Careful experiments prove that from thirteen to twenty pounds of honey are required to make a single pound of wax. * * * Many bee-keepers are unaware of the value of empty combs; suppose honey to be worth only fifteen cents per pound, and the comb when rendered into wax to be worth thirty cents, the apiarian who melts a pound of comb loses largely by the operation, even without estimating the time his bees have consumed in building it. It should therefore be considered a first principle in bee culture never to melt good combs. One pound of beeswax might be made to store twenty pounds of honey; and the bee-keeper would gain the difference in value between one pound of wax, and the honey which the bees consume in making a pound of comb."—*Langstroth*.

"Wax is not gathered like honey, or pollen, or propolis. If bees could gather it, it would cost them less than it does. They have to manufacture it at a very great expense to themselves and their owners."—*Pettigrew*.

"Wax is the most expensive article used by the bees. * * * The time spent in constructing the comb should also be taken into account, which if occupied in gathering honey, would at this season of the year enable them to store much more, and making the cost of a pound of comb, equivalent to at least twenty-five pounds of honey. This honey at twenty-five cents a pound, would give us six dollars and twenty-five cents, as the cost of a pound of comb. Good combs melted into wax and taken into market, might bring forty cents a pound, which deducted from the cost price, would show a loss of five dollars and eighty-five cents on every pound of wax sold. These estimates show, that the bee-keepers cannot afford to melt down any combs that can be used to advantage."—*King*.

Impressed with the importance of an Artificial Comb Foundation, I constructed a machine for making them, samples of which I sent prominent apiarians with the following result.

MR. JOHN LONG, Dear Sir:—I submitted your Artificial Comb Foundations to a practical test and found them acceptable to the bees, and I think are destined to entire success. When the bees commence to build their combs only very few can work, and it is not until considerable progress has been made that they can unite their efforts. I filled all my surplus boxes with your foundations, having first bathed them with a solution of honey and water; the bees all went to work and the combs swelled out as by magic. Its success will depend on the price.

Respectfully, AARON PENNINGTON, N. Y.

MR. JOHN LONG, Dear Sir:

ST. JOHNSVILLE, MAY 18TH, 1875.

The experiments I have tried have proved a success; all that I anticipated. I have satisfied myself that the Foundation Comb will prove an acquisition.

Yours, M. QUINBY.

MR. JOHN LONG:

CHERRY VALLEY, MAY 31st, 1875.

* * * I am inclined to a favorable opinion of your foundations, and shall watch the practical test with great interest, for if it proves practicable, I shall consider it a great acquisition to the bee business.

Very Truly Yours, J. E. HETHERINGTON.

MR. JOHN LONG:

DES MOINES, IOWA.

I have tested your Foundation Combs, and am more than pleased with the result; they are as perfect as can be.

ELLEN S. TUFTS.

30 QUEENS FOR \$30.

Owing to the failure of the principal honey flowers, I have concluded to raise Queens, and will sell untested Queens, raised from Imported Mothers, at \$1 each, sent by mail. I will sell nuclei in full sized hives containing nine frames, 10x17 inches, with three combs of brood and bees and "dollar" Queens for \$6 each, delivered at Express office. Can be shipped any time and built up in full colonies.

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WE have made the breeding of **ITALIAN QUEENS** A SPECIALTY FOR THE PAST FOURTEEN YEARS. All Queens sent by mail. **PURITY & SAFE ARRIVAL GUARANTEED.** We breed from Imported Mothers. One Queen \$1.25 or \$14.00 per doz.

8

H. ALLEY, Wenham, Essex Co., Mass.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

AUGUST 1, 1875.

No. VIII.

OUR OPPOSITION "AIR CASTLE."

PROBABLY BELONGING TO THE 20TH CENTURY.

DEAR EDITORS:—I am *very, very* sorry to tell your "air castle" to the ground, almost before you have got it built, but I have devised something so far in advance of it, that I think you will tender me a vote of thanks. Believing that you are anxious for the *point*, I will proceed. First, you must build a tank, (any where in your Apiary, or thereabout), elevated upon posts, or any suitable foundation; next you must use my new artificial comb. Now, as all which I am about to explain, is covered by heavy letters patent, both in this and other countries, I will without fear go on. My combs are built by the bees upon comb foundations, similar to the late Samuel Wagner's, only that I use *two* foundations for each comb in the following manner. My foundations are of light sheet iron, (galvanized) and are placed $\frac{1}{2}$ of an inch apart, and closed all around, top, bottom, and sides, so as to form a vacuum between them. Now the bees will build their "cells" outward from each of these foundations. I forgot to say that I have a fine hole through the foundation at the back of each "cell," also a $\frac{1}{2}$ inch hole at the back end of each comb. I also have an inch hole in the back end of each hive. I now lay "gass" pipes just a little way under ground, all in connection with a large one that runs to the top of the aforesaid tank. Each of the underground 1 inch pipes enters from the large tank pipe, to the back end of each hive. You will now see that all I have to do is to attach a force pump to the tank end of the large "gass" pipe, and pump all the honey from all the supers at once. I also have a 2 inch pipe running from my elevated tank to each of our 14 grocery stores, with a faucet at the grocery end of the pipe, from which they draw the honey as they would from a barrel. The tank holds about 250 barrels, and being elevated, the faucets at the grocery stores are always full.

The above is substantially the same as my specifications. What I claim as my invention, and desire to secure by letters patent, is: First, the double comb foundations, when used together, in the manner, and for the purposes described.

Second: The hollow, or vacuum between the walls, or comb foundations, in combination with the said walls, or their equivalent, substantially in the manner, and for any or all the purposes set forth.

Third: The elevated tank in combination with the store-keeper or his clerks, or their equivalent, for any or all of the purposes set forth.

I will here omit the succeeding claims, and give your readers the 21st and last claim which is: The "gass" pipes D, D, R, R, V, V, and the rubber pipes S, S, in combination with the hives, Queens, tank, grocery stores, and my hired man who does the pumping on the tank, substantially in the manner, and for any of the purposes I have or may, or any body else may herein-after for all time to come set forth.

I will close by saying that I shall prosecute to the fullest extent of the law any person or persons who make, use, "sell," or think, or cause his or their neighbor or neighbors to think of using, making, or "sell"-ing any body with my invention.

JAMES HEDDON.

Dowagiac, Mich. July 5th, '75.

The above arrangement is certainly perfect, with the exception that our friend has made no provision for collecting the money that would roll in, unless he travels around "in the hot sun" to these 14 grocery stores, to collect it: something that a man of his gigantic intellect

could not be expected to do. Had he not better lay a second series of "gass" pipes, and—beg pardon, it's *patented*.

SIMPLICITY HIVES FOR BOX HONEY.

EDITOR GLEANINGS:—Our spring opened very late here. Bees all wintered on summer stands, and came through well. First swarm May 29, full two weeks later than usual. I started with 27 colonies, and have transferred two into Simplicities, from box hives rotted through, yet they are good colonies. The hives must be over nine years old, and I think one is 15 years old. I have had them nearly 8 years, and they looked old when I bought them. I have saved nine swarms, and made one nucleus. I have two box hives in which boxes are nearly filled, and the bees are making comb outside of one as large as a peck measure. All are collecting honey rapidly.

I wish to make two suggestions, which I think will improve the Simplicity hive in working it for boxes. One is to have one side of the second story swing on a hinge at one end, or remain movable at both ends and hooked fast. The other is to use the lower hives exclusively for that, and either have permanent bottom boards attached, or boards especially for that purpose. A cover once used for bottom board can hardly be desirable to use as a cover again, all gummed up, and it costs more than a plain clamped bottom board. The second story can be made lower where one tier only of boxes is used. As it is, there is no point of observation without lifting off the whole, and boxes must be watched. An open side, with four side glass boxes one can see. As boxes must cover or nearly cover the frames, they wholly fill up the space of second story. I would like the opinion of one who makes comb honey in the Simplicity hives, as you do not I believe, Mr. Novice.

J. W. PORTER.

P. S.—I have made two lots of Simplicity hives: I have succeeded better with the last lot of 20, than with the first 12, and now I can make them as well as the best. I made the 20 in one day with dressed lumber. Charlottesville, Va. June 17th, '75.

While it is true that a bottom board could be made a little cheaper unlike the cover, you would have the disadvantage of having an extra piece about; for instance, in the Apiary, you would frequently have extra covers, but no bottom board, and *vice versa*. When we take into consideration, that a one story hive is ample in size for almost *nine* months in the year, and for new swarms generally all of the first year, it seems too bad to encumber hives the year round with all this extra rigging, that is only needed during the surplus season. If your upper and lower stories are unlike, you complicate the machinery of the Apiary, more than any one would suppose until he had really tried it.

Why *not* lift off the whole upper story to inspect the boxes? If you have made all tight around the top of frames where the boxes rest, you will have no bees in the way and no propolis; the single story without cover is very light, and easier to remove, than to unhook a

movable side, certainly. Again, the S. hive could never be made strong, at a reasonable expense, and have one side movable. Why not make the hives double width, as advised in Vol. 1st, and put the brood in the middle, and boxes on both sides and on top? If we were going to have box-honey, we would like to give them boxes enough to hold all they might be able to store.

SIMPLICITY HIVES, DRONES, POLLEN, ETC.

DEAR NOVICE:—Here it is the last of June, and no honey to speak of yet. I have increased my bees, (21 colonies), to 30, and sold 3 swarms. Now comes the problem; my hives are full of bees, brood and honey, but the honey is not yet ripe, and I intend to let it stay there until it is. But my bees swarm, and I can't help myself. What is the remedy? Empty combs and a larger hive.—Ed.] Last season honey could be taken almost as soon as gathered, and was thick and nice. This season, owing to warm moist weather, it will not do to take until it is *all* sealed. If there was any sale for bees here I could make a good thing raising bees, as this abundant supply of thin honey beats the "Jews" for brood rearing. I succeeded so well last year in preventing the swarming fever, that I thought it was now no trick at all; but thin honey beats me. The honey after it is sealed, is very thick, and just equal to any I ever saw.

By the way I have an idea which, if true, proves drones to be something more than the loaters they are said to be; it is this: the more drones there are in a hive, the sooner the honey ripens; this may be partly owing to the extra heat, but cannot be altogether that, as some hives that are almost droneless have twice as many bees by measure, as some of the drone swarms, and their honey is longer ripening. I find that the more workers, the more honey, but the more drone comb in the brood nest, the thicker the honey; the honey all being the same number of days old. My theory is that the food fed to drone brood is composed of the thin watery parts of the honey. We, (my brother-in-law and myself), got your dollar hive and fifty frames that we ordered of you, and he made four more hives, and I have filled them with bees. I never see them without wishing my hives were like them. Your friend, that we put the frames together wrong, and thus made the hive too long, won't do, as it makes out 1-16 inch difference in the length of a frame, whether the corners are put on the sides first, or top, while that hive was nearly if not quite $\frac{1}{4}$ inch too long, inside, and the simple frame you sent would fall off one rabbit if crowded on the other, and as I understand the Simplicity hive, there should not be more than 1-16 inch end shake. Now I am about it, I may as well speak my mind. I don't go a cent on your movable bottom, two story, beveled bottom arrangement. The two story principle is all right, but I want the bottom of my frames in the hive to be $\frac{1}{4}$ inch from bottom board, and the top of hive to be $\frac{1}{4}$ inch above frames for convenience in tucking quilt, and when the upper story is on, I want only $\frac{1}{8}$ inch space between tiers of frames. I can have all these, with an upper story made on purpose, and cannot without; and I don't see any reason in your position, that to make one hive serve as this extra story three months in the year, you spoil it for anything else the whole year. I could not be hired to use a hive with a movable bottom board, and I think Langstroth entrance blocks the best entrance I ever saw. Now for the other side of the story. I am completely disabused of my old notions in regard to side opening, tack infested hives. The Simplicity corners and rabbits and frames hang just beautifully, and it is the easiest hive to work with I ever saw.

I cannot describe the hive we made out of your dollar hive, but I got all my ideas from you in GLEANINGS, and thank you a thousand times for them. If GLEANINGS was patented, I believe I would violate my promise never to invest in another patent. You are right in supposing that my bees stored lots of pollen last fall. This country has always been noted for the large proportion of bee bread in the combs of wild bees, and tame ones that are brimstoned in the fall. I have known instances where 40 lbs. of well filled combs from a bee tree strained only 15 lbs. of honey, the rest being bee bread and wax. Thanking you for your patience and attention, as the lecturers say, (if you have read thus far), I remain truly yours.

R. L. JOINER, Wyoming, Wis. June 30th, '75.

Friend J., we not only read every thing you send, but often think best to give it to our readers also. We felt a strong temptation to cross out the part about that hive being rather long, but if we had done it, we should feel that we had not been quite honest.

The wood top to our saw table must have "swelled" or something, for we discovered to our dismay, one day, our hives were growing rather long. It is all fixed now, and we don't know what else to do, than to tell you all to send in your bills for damages when we fail to live up to our teachings.

By the way, on account of propolis that sometimes accumulates, we prefer about $\frac{1}{8}$ or a little more end shake, but no frame should ever allow one end to slip down, by any means. In regard to having upper and lower stories *unlike*, we can only say we feel sure that you will eventually agree with us after you have had several years' experience with both kinds. They are only "Simplicity" by being both exactly alike. After you have once tuck-ed a quilt down in place, and allowed it to remain a week or two, you will find it can be worked nicely even with only $\frac{1}{4}$ inch above the frames. We really *cannot* yet decide which kind of hive is going to be preferred, the two story or double width; each has considerable advantages over the other, and this season's work strongly inclines us to the belief that bees prefer to store their surplus directly over the cluster. With the metal corners, it is easy to make a two story hive that will allow the upper story to be made a permanent fixture. Such a hive would be beautiful for extracting, but quite unwieldy to carry. With a movable side, we could take out the lower combs independently of the upper, and with a long quilt to cover this side as well as the top, it could be closed without killing bees. Some stiff outside cleats or braces would be needed for an outdoor hive, but in our house Apiary, it all works beautifully. Be thankful for the pollen.

OUR LINDEN ORCHARD.

IMAGINE our astonishment and delight at finding *fice* of our young basswoods quite well laden with blossoms, as we passed through them on the 11th of July, not so much as even thinking of such a thing. The first one noticed was not more than *one inch* in diameter, and although it contained more than a hundred blossoms, not one of them was higher than our head, in fact every leaf on the tree could be easily reached by the hand. A still more agreeable surprise awaited us, in finding that these blossoms from trees that had been cultivated, contained larger drops of honey in the nectaries, than we have ever before seen in any linden blossoms, and this in the face of the fact that scarcely a trace of honey is to be found this season in the blossoms of the trees growing in the woods and fields about here; in fact it looks very much as if linden was a failure this season, for it is now, July 13th, in full bloom, and our suspended hive is not showing to exceed $\frac{1}{2}$ lb. per day, and some days not over one ounce. The young trees are making a fine growth this season on account of the very abundant rains, and if we are to judge by these few, we shall soon have blos-

soms enough so that we can erect on the premises one of our house Apiaries, if the project is a success.

This grove is located just about 1½ miles from our present Apiary, and it has been a problem to us ever since the year it was planted, (1872), how we might best secure the honey. At first we designed making our residence on the 10½ acres, but since the advent of GLEANINGS, and the various branches of business that have sprung into existence in connection therewith, we could not possibly be so far from our depot and post-office. Do you not see that the house Apiary is going to solve all these troubles? Such a building with its *heavy double doors*, would be almost proof against burglars, and it could be so located as to give the bees the least amount of travel—by the way, if you think this an unimportant item, you should just view the ragged wings of these faithful little “sons of toil” as they heap themselves up in front of the hives, at the approach of a thunder storm, worn by being obliged to go from town into the country and back again loaded—and yet to have all our implements ready for work whenever we chose to pay them a visit.

Last season we had the ground spaded up around each tree, but this season the trees have until now been allowed to go their own way; at present we are having the grass and weeds mown down, to be piled as mulch around their stems, for the twofold purpose of keeping down weeds and grass, and preventing the heavy growth of the suckers that persist in starting up. If trees under cultivation are going to bear honey at the rate the few blossoms mentioned seem to indicate, a honey farm may not be so visionary a project after all, and if the house Apiary does even as well as our out-door Apiaries, there would be no great obstacle in the way of one person taking charge of a dozen or more; and they may be so located, as to not interfere with each other, and yet not too far distant from each other for a comfortable buggy ride. We have already among our readers, those partially on the track.

FERTILE WORKERS AGAIN.

FRIEND NOVICE:—I am in the same trouble that G. E. Corbin was in the July No. of GLEANINGS, under the head of “Fertile Workers,” but I have not the remedy you described in that number. I have one box and three movable comb hives; my comb hives dwindled down so last spring that I thought they could not recover. Two of them are getting along as well as can be expected, but the third in comb hive has a fertile worker; as soon as I could get a capped Queen cell I introduced one, the next day she came out, but her reign was short, for in four days her corpse was brought out and rolled overboard; then GLEANINGS came to hand and I gave it up. I had but one frame of brood to give them and that I gave before inserting the Queen cell. I cannot divide them into nuclei as there are only enough bees to make one; if there is any remedy in my case, please give in next GLEANINGS.

W. L. HIRLINGER, Coles Creek, Pa., July 15th, 75.

About dark lift out all the combs that bees are clustered on as quietly as you can, set them in a new hive and carry it to a new location, some rods away. Most of the bees will go back to their old hive the next day and you can give them some brood or a Queen cell without any fear of trouble; as the fertile worker part becomes reduced, remove the combs one at a time, without carrying back the bees, until your colony has a new laying

Queen, then you may shake off all that remain and restore all the combs, for even should this troublesome worker go back, she would not gain an entrance. Sometimes they can be caught in the act of laying, and killed at once.

Blasted Hopes.

EDITORS GLEANINGS:—I thought I would tell you of my seemingly bad luck in the bee business, and ask if you could give me any encouragement. I am a new beginner, never saw the inside of a hive, until this spring. I purchased 60 little families; all came through well, but a few were weak, put them on the summer stand after hauling them 20 miles in last of April; lost 13, doubled 2. Sent for and received the GLEANINGS all right; studied hard and went to work to strengthen the weak. Gooseberries yielded lots of honey, and my bees got strong. The last of May, I went to increasing. I divided a few, and had good luck and no trouble, but the new swarms were always the strongest. I did not want to increase, but intended to try for box honey. Some writer says the only secret in obtaining large yields of honey is in having strong stocks of bees, but does not tell how to make them strong. My neighbor told me to cut out the Queen cells, and in a little while the hives would be full. I did so, and on the third day after, three swarms issued. The fourth day, four more came out. I cut out every thing in the shape of a Queen cell on Friday, and to-day, Sunday, a swarm came off and took, I should think, nine-tenths of the bees from the hive. Can you tell me how to have strong stocks? I have become discouraged, for it is about time for Linden blossoms, and have concluded to kill off all my bees this fall, extract the honey, and sell the comb if I can. There is so much of this adulterated stuff in the market that I do not think I can live on the proceeds of 60 or 70 stands of bees, and it takes all my time. Please tell me in your next whether it will pay, or how much it will pay me to the hive, to kill off and extract.

Sloan, Iowa. June 28th, 1875.

J. N. THOMPSON.

Now friend T., we may as well admit before going farther, that the perusal of the above has left us a “little riled.” You say you have taken GLEANINGS and “studied hard,” and yet because some one told you that cutting out the Queen cells would prevent swarming, you rely on that alone. You speak of the 60 “little families” in your opening remarks as if you really were humane, and yet you conclude by asking our advice about killing them all. No, please don’t kill the little fellows if we have any influence at all in the matter, but sell them at some price, and never engage in any occupation hereafter, in which you will be likely to have charge of any of God’s creatures. We know you have heard of Extractors, because you speak of using one, after the bees are *killed*, but why in the world not use it now? If you keep the honey out of the hives and give these little emblems of industry room, they will very rarely swarm. If you cannot sell your bees in your own vicinity, you certainly can by advertising them, and at excellent prices too, since these times of grievous losses in wintering.

Friend T., if we were to happen along about the time you were killing your “60 little families,” we verily believe we should pitch into you with “hammer and tongs” or whatever else might come handy. It is not possible that you have no such intention, and are only playing a sharp way to get a big advertisement, (knowing our weakness), is it? At any rate we have fallen into the trap, and if our readers write, and you then want a big price for these bees, we will assuredly hear all about it. On the other hand, if you honestly wish to give up the business, feeling you are inadequate, we will be glad to help you all we can.

OUR OWN APIARY.

JULY 6th.—We have to-day finished taking out 2 barrels of very choice clover honey; the yield has been so slow, that the combs are capped from top to bottom in both stories of our very strong colonies. The Queens reared last season from the imported stock, are almost without exception, the mothers of powerful colonies, filling 20 L. frames, so full that it really seems as if they could use another story. With the gradual yield as we have it now, it would be nothing strange if some stocks could furnish new combs almost as fast as the honey is gathered, and we were stung so badly yesterday, that we confess to having thought seriously of box honey, but then came the query, how are you going to get even comb honey away from them? To get 2 or 300 lbs. of honey away from the bees that stored it, must be a laborious operation in any case it seems to us, and we really know of no better way than to have it stored in frames, and to get the bees off these frames, would be just equivalent to getting them off as we do now. Suppose for instance, you have taken from a hive 20 combs of nice sealed honey weighing 5 lbs. each, making 100 lbs. of comb honey that will sell for \$30.00. When we have got thus far, it would be very much the easier way for us to get this to market, to extract it and put it in a barrel; in this case we should get but \$15.00, but we would have the combs that would be filled again perhaps just as full in a week or ten days. Another point comes in; if a bee-keeper keeps increasing his stock of surplus combs each year, he will soon have more than he can well use, for unless bees can have some comb building to do, they do not seem to work with the most desirable activity. Now in the above estimate our combs would net us 75c. each or better, for 100 lbs. of comb honey as it is usually sold would not yield 100 lbs. of extracted—perhaps from 75 to 90. Perhaps we had better admit, that comb honey is of a better flavor than the extracted, as it is usually sold, and the reason is, that scarcely any bee-keeper will allow the combs to become capped over as is the case with box honey. The honey that we have just been extracting, is capped over well enough, but Mrs. N. has had such a task extracting, even with the help of an assistant, that she entreats us not to let the bees get ahead again, as they have this time. With a season like the present, if we were sure of double the price for comb honey, we do not know but it would pay best, but when the sudden rush of linden came, we should rely on the Extractor.

We are more than ever convinced of the superiority of strong stocks for honey; while our weak ones gather no more than they consume, our heavy ones make a good surplus, and our powerful colonies with their immense force of workers get honey every day, and almost before we know it, have their entire 20 combs filled up solid. Giving a weak colony brood from others, it seems to us, hardly answers the same purpose. The colonies that were strong last fall, were strong this spring, and kept getting stronger with every month, until they now send out, it almost seems, bushels of bees.

July 5th.—Three barrels and part of another

of the very finest clover honey it has ever been our lot to extract. The yield has been so gradual, that we should get very little were it not for our powerful colonies; without great care, such as keeping quilts over exposed combs, we should have robbing all the time.

About the most profitable "machinery" we have ever tried, is a couple of boys about a dozen years old. One, belonging to a neighbor, has taken a sudden and intense interest in bees, and whenever a hive is opened nothing will deter him from seeing all there is to be seen of the curious doings inside. We have just been over the hives once, and he has taken nearly every comb as fast as we have shaken and brushed the bees off, and carried them into the bee house; he also carries a bunch of the asparagus tops, and by the time the combs are handed to Mrs. N., scarcely a bee is to be found lurking on them. Master Ernest has become quite expert with a shingle, in keeping out robber bees, besides assisting his mamma. It seems rather hard to strike down a bee, yet when we reason that if no bee is allowed to get home with a load of *stolen* sweets, robbing very soon ceases of itself. At such a time as this, the two story hives are *very* inconvenient; (we have got over the idea that a single 10 comb hive might answer; for some of our colonies have almost 10 entire combs of brood, and these very ones, are the ones that get honey "when there ain't any.") The only way we get along is to carry all the combs from the upper story into the house, whether they all need extracting, or not; then they must be left there until the lower story is all done, and the combs returned to it. About this time both upper and lower stories are a perfect mass of bees, and to get one on the top of the other without crushing a bee, is considerably like closing up a hive of tight fitting frames, only still worse. If we first lifted the top story off and set it down, as we did two years ago, they would now get to robbing "awful." With the Standard hive, there is no pulling it to pieces at all; we simply commence at one end, and put the combs back as fast as emptied, and when about half way through, we spread the quilt down close over the finished end, and turn up the other end of it, and a robber is confronted at every point by bees not too much demoralized to defend their stores. The Standard hive is now falling behind some of the two story hives, on account of their crooked Queen being unable to deposit eggs as fast as some of the others. There have been fortunately no attempts at swarming, since the one from the suspended colony, but upper stories were all that prevented it. Another trouble with the upper stories; the bees will persist in building combs between the upper and lower story, no matter what the distance may be; with the Standard hive of course this is all avoided.

This disposition gave us the idea of a novel honey box, all of glass and tin, made especially to suit the peculiarities of the Italians. When we get them nicely filled we will tell you more about them.

July 14th.—Basswood is doing a little better, but it is still far from being a fair yield; about ten days will be required at the present rate to fill 20 combs, when the combs are already

built—strong stocks gathering perhaps 2 or 3 lbs. per day. Now mind, they will have ample time to get it all capped over, and our honey will be extra nice, even if it *does* take an extra force of uncappers.

Our house Apiary is nearly ready for the bees; but 36 hives are to be tried in the room; there are 8 sides to it, each 6 feet wide, and 7 feet high, the east and west sides are occupied by the large double doors mentioned, and the others contain 6 hives each, 3 on the floor, and 3 on a 20 inch shelf three feet from the floor. Nothing but an end board separates one hive from its neighbor, and as we mean to avail ourselves of friend Dean's idea, we shall have no front to the hive except the division board; the L. combs running parallel to the wall. These division boards are simply a sheet of glass lined with folded tin, allowing visitors a fair chance to see, and also enabling us to see when any Queen needs another comb, without opening a hive. Nothing but a quilt is needed on top, and this permits of closing the hive up to three, two, or even one comb with greater facility than even the Quinby hive, the glass division boards moving in their places very easily. The lamp nursery is to be located in the centre of the room—in place of the extractor at present unless honey should come—and we can dispose of Queens as fast as hatched to the different hives with great facility. A Queen register is placed on the wall just over each hive, and no numbering is needed, for one can forget the locality no more than the bees do. For instance, if we wish to send any one to any hive in the house, we have only to say "middle upper hive on north-east side," or "lower left hand on south-west side." We shall start cells for the whole 36 to-morrow, and unless we are a bungler, each hive should have a Queen by Aug. 1st.

July 28th—Fifteen colonies are rejoicing in the house Apiary, and more are being made as fast as a Queen is found hatched or hatching in the lamp nursery. They have all been introduced by letting them loose at once, sometimes at the entrance, and sometimes, especially if they are found after dark, by simply raising a corner of the quilt and letting them crawl in; sometimes a bee starts forward as if to attack, but invariably, after pulling them a little and looking them over, seems to say, "Why you poor young thing, you are not worth noticing;" and the "young thing" never having seen a bee before, crawls up the bees with the same confidence with which a newly hatched chicken cuddles up under your hand, while a Queen 48 hours old will run and peep, and get killed in a minute.

The two first hatched, (on the 20th) are now laying, and although we have taken no pains at all to make the entrances unlike, either by paint or otherwise, no confusion has resulted at all. We took particular pains to see a Queen take her flight, and think there is not the least danger. She took a look into the entrances on either side, it is true, and then seemed to say, "This is not my house, nor this one, but *this one is*," as she glided into her own 2 inch auger hole; *see* like them vastly, not withstanding some of our friends ridiculed the idea of 2 inch entrances. The walls are 4 inches thick, you will remember,

and we worried about the bees having to crawl this distance, but bless you, they sweep right in, and alight with their huge loads of pollen directly on the outside comb. The door steps are 14x10, and just sloping enough to carry off the water. The interior, works so perfectly that we will give you a diagram of one hive.



Let A, A, represent 4 inch wall of the building with its 3 dead air spaces made with building paper; K, 2 inch entrance hole, B, door-step, C, shelf that holds the hives, G, pane of glass 10x18, lined with tin, and made to hang on the rabbets like the frames J, for a division board. H, D, is the quilt, made of duck, or canvass, 19½ inches by 26; it not only covers the top of the frames, but hangs down over the glass division board, and excludes light. To facilitate handling, a strip of tin 1 inch by 19½ is folded over each end, one being crowded down in the rabbets tight up to the wall, and the other, lying on the shelf C. When we wish to open a hive this strip is lifted until the frames are uncovered, and then it is laid across the nail I, this takes the quilt entirely out of the way, and leaves it so all adhering bees are sure to crawl right down into the hive again instead of meandering about the room and utensils. In a house like this the Quinby smoker is quite unnecessary, in fact it is a nuisance; a ball of candle wicking, and a box of matches we find all sufficient to make the bees go back when the quilt is raised, and to drive them away from the spot where we wish to grasp a frame. When you are through with smoke, wet your fingers and pinch the end of your string. If you want more volume, double or treble the wicking. We were astonished to find that bees are much quieter in a darkened room, and our *outside* doors when closed make the room as dark as ink; by closing them partially, it is amusing to see bees that are inclined to be cross, hustle out, or get back into their hives; in fact we have them in every respect completely under our thumb, in warm weather. Very few bees leave a comb when handling it, and those that do, go outside and find their own entrance, almost as quickly as when the hive is out of doors. In shaking the bees off the combs, they generally crawl back into the hive at once, but we have had a few heavy stocks start in a body and march all over the walls and ceiling, but if no other hive is open they will almost as quickly go back again, when the room is darkened. The glass division boards hung in the rabbets work beautifully, for we have a two frame hive, or one for 11 frames in an instant, and so easily is it moved, that we usually draw it back a little in removing frames, thus having a side opening hive after all. The convenience of working in a clean tidy room room, having all your implements always right at hand—and all your hives too for that matter—being always free from the annoyance of robbers, is truly, only to be appreciated by actual use. We have not yet tested the room with the extractor—the

Queen nursery occupying its position at present—and we fear it will be somewhat annoying to shake and brush off the bees in the usual way, but so far as all other operations are concerned, and the storing of the honey, the matter is fully demonstrated to our satisfaction already.

Our plan of making colonies has been to carry in all the frames of an upper story, bees and all—they usually contain some brood, as soon as a Queen is hatched; these bees have so far protected themselves from robbers at once, with one exception, and this upper story contained no brood. As there were plenty of bees on the well filled combs, we thought it would not matter, but found our mistake after nearly every bee had started for his old home with as big a load as he could carry, and the robbers very quickly volunteered to help. We promptly gave them a comb of brood and stopped the mischief, but not before the robbers had got so well agoing that they pounced on, and overpowered by sheer force of numbers, four more colonies in the house Apiary. We had no choice but to close the entrances, and then open them just at dark to let the robbers go home, hoping they would all get ready to keep down such attacks before morning. We tho't it best to get up next morning before 5 o'clock—so did the robbers. What was to be done? Our young Queens could not come out with their door ways "corked up." We sat on a hive and debated; then looked up the thievish colony—an easy matter on account of their excited and crazy activity—while the rest were all still. A minute more and their hive was in the house Apiary, and one containing empty combs only, in its place; all the entrances were then opened, and the robbers poured in and got their "fill," and then fairly made the gravel fly behind them, in their haste to get home and get another. Of course we were right at the entrance, and such astonishment, and lamentations as they set up, when they backed out and took wing, and tried it again! Their ambition was completely crushed, and after every robber had got *one load* we had peace and quietness. What was the use to put their precious load in empty combs, with neither a Queen nor brood? They are now humbly bringing pollen to rear a fresh lot of Queen cells, from some eggs we have given them. Another colony persisted in hanging out in front and would not work; we took all their upper story off, but *then* they hung out; we finally took all their brood away, and now they get up in the morning and go after pollen like the rest. We can't have any aristocrats in our Apiary; if it is necessary to make "poor folks" of them to make them go to work, then poor they must be made. Strong colonies are still storing a little honey, perhaps $\frac{1}{2}$ lb. per day. Brood and Queen rearing work beautifully, and but little care is needed to avoid robbing.

July 20th—Twelve Queens have hatched since yesterday, and our house will soon be full; three Queens were found at one time running about, but they seldom hurt each other where no bees are with them. Occasionally they bite open the unhatched cells, but this does no injury unless they pull off a leg or wing; many of them thus mature in full view. One cell that was put in unsealed bids fair to produce a perfect Queen; the cell is now capped with the cocoon of her own spinning. We certainly never before saw so many very large, long yellow Queens, and the high

temperature (100°) must be very favorable to their perfect development. With a house Apiary, like our own, and a lamp nursery, there is certainly a mint of money to be made in rearing Queens at \$1.00 each.

July 30th—The whole 35 hives are filled with bees—all but one have Queens, and all is peaceful. The trouble came about in this way: it rained yesterday morning, but the Queens *would* hatch. When the rain was over we made colonies as usual by removing upper stories, bees and all. Now our first 8 hives were made with $\frac{1}{2}$ inch space for quilt above the frames; when made two story we have nearly $1\frac{1}{2}$ inches, which the bees are sure to fill with comb. [This is a very bad fault, and we have since learned that a quilt can be worked very conveniently with only $\frac{1}{4}$ inch above the frames.] Well, as it was after the rain, robbers commenced work, and the honey that was set a running by the breakage of this comb, became so demoralizing that we feared our house Apiary would be a wreck, before night shed its welcome presence over the scene of warfare. We contracted the "2 inch holes," and ceased operations even if the Queens did keep hatching; and a long breath of relief we drew, when darkness came, for the wounded and dying lay all around the *six* sides of our "octagon." Two more colonies were fixed for Queens between dusk and dark, and then what was to be done with our pile of caged Queens? "Faint heart, etc.," we got Mrs. N.'s best lamp, opened wide both doors, put in trim order our Quinby smoker—nothing else would ever have answered *then*, and by 10 o'clock we had made strong colonies for the remaining 8 hives, hunted Queens, looked up combs containing eggs and brood for each colony, and in short did just what we wanted to do, mentally putting our thumb to our nose at the robbers, at the doorways of their hives, as we passed them with the lamp. Very few bees flew about the light when we kept it pretty well elevated, but it requires a free use of smoke. Didn't we come out ahead of adverse circumstances?

P. S.—That you may know "we too" "have troubles," we will remark that nearly every frame in the house Apiary had to have the arms of the metal corners clipped with a pair of pruning shears and then straightened with plyers, just because in our first experiments, we could not foresee that the supporting arms should be *not to exceed* $\frac{3}{4}$ instead of $\frac{1}{2}$ of an inch; this all had to be done in the night, and was perhaps the sorest trial of patience, both to ourselves, as well as to the "hybrids." The *full bloods* took it quite philosophically, and showed little disposition to flutter about the lamp. *Not one of the 35 Queens was molested in introducing.*

Gleanings in Bee Culture.

Published Monthly.

A. I. ROOT.

EDITOR AND PROPRIETOR.

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, AUG. 1, 1875.

But seek ye first the kingdom of God, and his righteousness; and all these things shall be added unto you. Matthew vi, 33.

Editorials all crowded out.

Bee World is sent to our subscribers for only \$1.50.

Brood by mail for Queen rearing, is proving remarkably successful this season.

We have just commenced to send out our Extractors made after the new model. If you want your frames to hang in them the same as they do in the hive, be sure and give width of frame *just under the top bar*. If made for a frame $13\frac{1}{2}$ wide, and only $11\frac{1}{2}$ deep, price \$4.00; all other dimensions \$3.00. We can now prepay express charges and secure low rates; tell us where you live and we will tell you how much.

AUSTRALIA.

DEAR NOVICE:—I have to say that 95 out of every 100 stocks have been overtaken by the bee moth; and in less than twelve months, I don't think there will be a single colony left in the country, except my own. Now who do you think is blamed for this wholesale destruction? Your humble friend,

Carroll. Now there is not one in the country that has come to tell me that I am the person that imported the "big bee moth," as they call it, yet I am fully aware that it is generally believed that it came in Quinby's bee box, and no one could convince them otherwise. Certainly nothing like them was ever seen here previous to the arrival of the hive from Quinby. I did all that lay in my power to have them destroyed before the box was taken to my place, but I have no doubt many of them escaped, as the wire netting was broken in several places. I told you what was done with the hive, some time ago, therefore it is useless to repeat it. They are just about six times as large as any moth I ever saw in this country before; many of them are larger than a drone bee.

I have seen hives overflowing with bees, and still the moth has riddled every comb, and driven the bees away. I have seen more than a thousand young bees on a single sheet of comb, with the caps of the cells all nibbled off, struggling to get out, but held fast in the cells by the moth worm. Every bee is imperfect in some way, and often two or three small worms in every cell, but never less than one. No pen can describe the ravages of this miserable pest. The bee-keepers of this country are discouraged, and giving up in despair without a single effort. I have had my work, for my bees and myself have had to fight against millions of them; many hives having been sacked within three miles of my Apiary. I stimulated my bees to the highest pitch, with out-door feeding; I had nearly 2000 brood combs badly damaged. I took them from the centre of the hive, and placed them outside the brood nest. Kept my bees busy carrying in sugar syrup for three weeks, and every damaged comb was beautifully repaired, and filled with syrup. It would have done your eyes good, "old man," to have seen those combs. My bees were greatly annoyed by those little black scamps, (I mean the native bees of Queensland), they don't sting, simply because they cannot; they are no larger than a small fly, but are wonderfully powerful in the jaws; in a fight they are too much for the black bee, they mount his back in twos and threes, and he has to take to his legs to get rid of them. They never store any surplus; the honey is in cells in the form of small globules, about the size of a royal cell. The pollen is stored altogether, as it were, and the whole nest is coated over with a kind of propolis, resembling gutta-percha more than anything else. I enclose a piece of brood comb, and propolis—now you have got all I can tell you about our natives.

I will talk to you a few minutes about the Ligurian bees. I hope my Apiarian friends across the brook have not shipped any as yet for me, but if they have, may the best of success attend them. You will see by the papers I have sent you, that I am promised help by the Acclimatization Society, therefore if Bannum Bros & Co., have not despatched any bees for me, please tell them to send them by the ship "Macgregor," sailing July 10th. I enclose a list of the ships sailing from San Francisco, will you publish it, and tell any of the others that have not shipped, to send by the same vessel. It will lessen the expenses, and I would like you to write "Bee Master" on all you send me, they will then come as straight as an arrow.

How are you getting on with the dysentery, and have you found a remedy yet? It is said by some of the wisemen that if bees could get out of their hives now and then during the winter, to take a purifying flight, they would not suffer from dysentery. Now, "old syrupy," I would like some of you to tell me how it is that our bees suffer from the same complaint? I never lost an entire colony by it, but I lost hundreds and thousands of bees by it once. It must be remembered that bees are never confined to their hives in sunny Queensland, not even for a single day, the year round. Now I can safely say that it is interior honey that is the sole cause of it here; two years ago I got 10 cwt. of cheap honey, and fed every pound of it to my bees. In less than a week afterwards the ground was covered with bees; when I saw it, I thought of the cause in a moment. I lost no time in getting my extractor in order, and straightway threw out every pound of honey the hives contained, and afterwards gave them ten hundred pounds of sugar syrup, and there was a change in the scene at once. Last May my bees gathered freely from the tea tree, and the honey produced dysentery in every hive. I kept the extractor going daily to keep it down, but before the blossoms were gone, one-half the bees were lost. I believe that I have used more sugar during the last five years than any other person; and that too, with the greatest satisfaction. We raise sugar in this happy land; we have mills throughout the country, and the kind I use, a good coffee sugar, costs a little less than 5 cts. per lb., and molasses 3 cts. per gallon.

Novice, there is nothing that ever grew on the earth, that can't grow here. By the time you get this note our winter will be upon us. If our Yankee friends could only take a peep at us they would envy us. The weather is all that a man could desire, beautiful sunny days, sometimes weeks without even seeing a cloud, with a splendid bright blue sky. The foliage of the trees is beautiful. We can do without our coats and vests during the day, but require them in the evening, and enjoy a good log fire at night. The bees are in their glory, having plenty of work most of the time. Novice, it is the finest, happiest, and richest country on the face of the earth.

With best wishes for your success, I remain yours faithfully, J. CARROLL, Mohawk Valley, Enoggera, Queensland, April, 23rd, 1875.

We give below the paper referred to: THE LIGURIAN BEE.

Dr. Waugh made mention of the terrible ravages among the hives of the common English bee committed by a species of American moth recently, unfortunately, imported, and which devours the young bee in the cell, causing the most complete destruction of every hive into which it enters. He stated that hardly a hive existed free from this moth in the direction of Milton, while the secretary gave evidence that it had reached at least three miles in the other direction (Breastast Creek). Dr. Waugh brought the matter forward in the hope that the society might aid in the importation of the Ligurian bee, which, it seems, is able to cope with this moth. It was resolved that the society should give every assistance in its power towards so excellent an object, and that Dr. Waugh should ascertain from Mr. Carroll what steps he had taken towards introducing the Ligurian, so that the society's help might be given in the most effective manner.

Mr. Carroll some time ago sent the money to Mr. Quinby for a hive of bees, and an Extractor. Mr. Q. sent them, but was notified at San Francisco that they would not take live bees on board, so Mr. Carroll says, and Mr. Q. did nothing further than to write Mr. C. for further instructions. Meanwhile the bees starved, and then of course the vessel would receive the hive, filled with the moth worm that flourished in the warm climate of California. In the still more congenial clime of Australia, they have developed into the pest named above, and now the Italians seem to be the only hope. We give below the names and dates of sailings.

LEAVES SAN FRANCISCO.

Cyphrenes	...Jan. 30	Cyphrenes	...May 24
City of Melbourne	Mar. 1	City of Melbourne	June 21
Macgregor	...Mar. 29	Macgregor	...July 19
Mikado	...April 26	Mikado	...Aug. 16

Mr. Carroll adds:

Tell all those that have not sent bees, to ship them by the "Macgregor." I had to name a vessel to the A. society, in order that they may use all the influence they can for the safety of the bees. The agent of the ships is a member.

Mr. C.'s wholesale sugar experiment does not surprise us in the least; those who are not satisfied can keep on experimenting, but as for ourselves, we shall always sell the honey, and feed the bees on sugar.

Honey Column.

MUCH is still written about honey being a drug in the market, and about adulteration having ruined the sale of it, etc., but we are confident our friends are only borrowing trouble. All the honey we have ever advertised in this column has been, we believe, sold at good prices, and the fact that none of our readers have any for sale at present, seems to us good proof that good honey is nowhere a drug in the market if offered at fair prices, say 20 or 25c. per lb. retail. Our country stores and groceries are not supplied by any means.

A friend not far away has got all his last season's crop—about 3 barrels—besides the present one, on hand at this time, and yet there is a country store within a few rods of his Apiary. Said we, "Have you any for sale at your store?" He replied in the negative.

"But could they not sell considerable?"

"Yes I know they could, but it is so much trouble to get it out of the barrels."

Now this is not a solitary instance; we have had some such work ourselves. It has been said that it is too much bother to sell it out in small quantities, but is it really any more so than to sell butter and milk? Much depends on having things conveniently arranged. Stand one of your barrels on end, and then bore a hole in the head, and screw in a molasses gate, now tip it back, and you can fill jars with rapidity, and without any daubing. After the weather gets cold, you had better have something like a large tin dish pan with a "nose" on one side. If you use a large sized gate the honey will run out of the barrel into this pan even if candied; now heat it gradually nearly to the boiling point, pour it into your jars while hot, and seal up just as you do fruit, and you can keep it for years without any more trouble, and in this shape it will sell when it once gets started, and at a good rate too.

"Mother can't we have some honey for supper, we haven't had any for so long?"

"Why, my children, we cannot get honey at this season."

"Yes we can too; I saw it at Mr. Smith's grocery. It is put in glass jars."

"But do you think it is real honey?"

"Why mother, of course it is, for every jar has got Mr. Jones' name on it, and he keeps *such lots* of bees, and it says 'pure honey.' Mr. Jones is a good man, is he not mother?"

Dear reader, are you Mr. Jones, are you a good man, does every urchin in your vicinity know what your honey tastes like, and that you would not use any deception in the matter for all the honey in the world? "I'll work for you all day among the bees, and I won't charge nothin'," said a small boy a few days ago, after we had given him a small "chunk," that had been built between the upper and lower frames.

Good honey will always sell, as surely as butter and milk will sell. So long as we have such trouble wintering our bees, we are almost obliged to charge a good price for it, but who would be sorry to see it retailed for a price that would put it on every table? How many housekeepers have honey at their disposal the year round? We retail it here at 20c., or if over 50 lbs. are taken, 18c. A self sealing quart fruit jar, jar and all retails at 75c.

This year like all the rest, seems to demonstrate that while box honey only now and then succeeds, those using the extractor, are making a sure and safe business of it year after year as reports below will show.

OUR MEDINA CO. HONEY CROP.

I have up to this time extracted and put in packages nicely for shipment 1250 lbs. G. W. DEAN.

P. S.—Honey is of an excellent quality. River Styx, O., July 20th, '75.

Mr. Dean had about 40 stocks in the spring, and has now we believe about 50. As he

makes a business of Queen rearing, we can hardly expect a large honey crop.

Dear Sir:—I call this a poor year for honey in this locality. I have taken about 3300 lbs., all white clover honey of good quality; have made 60 new swarms, will probably collect honey enough to winter on, will have some 150 good swarms. Honey is not plenty in this section.

Wm. H. SHANE, Chatham Centre, O., July 22, '75.

My yield of honey this season will be about 800 lbs. extracted, and 150 comb honey. I might have given you a much larger report if I did like a good many who extract too early and get poor thin watery stuff and then put it on the market, and thus reduce the price of good honey. I will have two barrels of good, choice, thick, clover honey. I want 18c. per lb. My honey was about all capped and ought to command the highest market price.

Wm. PAYNE, Spencer, O., July 21st, '75.

I have taken between 5 and 600 lbs. of very nice clover honey. Had I relied on box honey as I used to do, I should have had little, or none at all for the past three seasons.

JOHN WILLIAMS, Marr, Medina Co., O., July 23, '75.

I think you will have to put me in with "Blasted Hopes," as I was hoping to have not less than 3000 lbs., and have had only 1200 so far. I think it is owing to so much rain that my bees have not done better. Our neighbors H. & J. St Johns, have 750 lbs.; their price is 16 cts. A. A. RICE, Seville, O., July 25th, '75.

We have taken about 1150 lbs., all clover, and our hives contain more than enough for winter, even after increasing from 46 to 90 colonies. Mr. Blakeslee and Mr. Phelps we think have about one ton, and Mr. Pratt of York, about 500 as near as we can recollect, some other small lots will make something near 12000 lbs., yet we have miles of good pasturage with scarcely a bee-keeper. One township might easily accommodate all our bee men we verily believe, and yet Medina Co., will not average better than the rest of the U. S. The rest of the world either do not report, or they are not getting honey. The following is the only definite one at hand, at this date, July 28th.

I have increased from 70 to 102; I have slung 3840 lbs. up to this date, and shall extract some more yet.

ELI COBLE, Cornersville, Tenn., July 13th, '75.

Mr. Muth gives us the following in regard to the *selling* prices of honey in Cincinnati.

Extracted honey, in shipping order, 1 lb. jars	
(12 cases) per gross.....	\$29.00
(12 jars) per case.....	3.50
(12 cases) per gross, 2 lb. jars.....	72.00
(12 jars) per case.....	6.50
Extracted honey, in bulk, 12 to 20c. per lb., according to quality.	
No transactions yet in comb honey.	

Cincinnati, O., July 19th, '75. CHAS. F. MUTH.

It will be observed that the above makes a wide difference between honey in bulk, and that put up in jars, boxed, and ready for shipment, but if any one thinks he can do it cheaper, he is at liberty to try. Where we supply our country stores, and only deliver the honey as fast as sold, the case is different, and we are very well satisfied with 20c. per lb., or 25c. where jar and label are included. Our friends will find that the quart fruit jars are much less trouble, *all around*, than smaller packages. Mr. Muth now offers the Mason fruit jar, which we consider the best, at \$17. per gross. See advertisement.

None of the Honey buyers seem disposed to make any offers for honey at present. We folks in Medina Co., think our honey is worth 16c. by the barrel; we retail at 20c., or if over 50 lbs. 18c.

Heads of Grain, FROM DIFFERENT FIELDS.

DEAR NOVICE:—Here we come with a few jots. In the first place, your Honey Knife has proved to be a splendidly finished instrument, of finely tempered steel, and it is so thin, and so sharp, that it admits of no careless handling, unless one delights in the luxury of bandaged fingers! Then there is Quinby's Smoker—not perfect perhaps—but nevertheless, worth its weight in gold.

Then here comes your Bee veil,—a neat, convenient, and comfortably cool protection for the face—the best I have yet seen. And Novice, do you know that I look upon the attempt to handle bees in general, and hybrids in particular, with neither smoke nor any kind of defensive armor ("Stars and Stripes protect us"), as something akin to fool-hardiness?

Next come our thanks for that splendid picture, Medley, which we hope will be kept as a memento, long, long after all concerned in its production shall have passed to their reward, "for whatsoever a man soweth, that shall he also reap."

If I had the proper magnifying glass, I would be likely, just now, to disobey orders, in respect to the photo. of your Apiary, in order to ascertain, if possible, why P. G. would not let the light of her countenance shine in the Medley!

The Automatic River works beautifully, in theory, but in practice the swarms cluster on the apple trees!

Now Novice, please "stand from under," while we inquire if a clothes basket is really the best kind of a hive, and your method of procedure is just "the correct thing?" Respectfully, D. P. JANE.

Koshkonong, Wis. July 5th, '75.

There are times, it is true, when it would be rash in the extreme, to attempt to handle particular colonies, without smoke, and we remember a case where some friends went to examine their bees according to our instructions; they remembered all the directions given except one item—they entirely forgot all about *smoke*, and thought they had had experience enough with bees to last them a life time.

We would never use a veil, were it not for mischievous bees coming in from other colonies, that cannot be readily reached by smoke; for with the Smoker, we can keep in perfect subjugation the inmates of any one hive. Very likely our attempts at hiving were awkward, as we never have had much experience with swarms.

How would you have taken them off the apple tree, friend L.? Since that time we took the same clothes basket and fastened some green twigs in the bottom, then inverted it over a swarm that was hanging to some limbs that could not easily be shaken, and "poked" them gently with a bush, until they all clustered nicely and quietly in the basket; they were then deposited on a sheet, the corners tied over the basket, and we carried them safely some distance, keeping the basket inverted. We like the basket because it gives them plenty of air, and don't let them get out.

From the little piece of comb containing eggs, that I got of you last fall, I got 12 Queen cells, and I had bad luck; some were drowned, some chilled, and some mated with black drones, and so I have only 2 pure ones. C. J. YODER, Orrville, Ohio.

Well, friend Y., that is rather bad, to get only two pure Queens from twelve cells, but after all, was it not a pretty fair investment, to get two pure Queens for only 25c, and those from an imported mother? Since we have been in the habit of sending small larvæ, well supplied with their milky food, we have had scarcely a failure, when the distance was such that they were received inside of, say 48 hours. All the larvæ we send out is of course, from

our imported Queens; and during the months of June, July, Aug. and perhaps Sept., it is a very cheap way of introducing into your Apiary a fresh strain of the Italian blood. There should be, if there are not already, imported Queens, within at least 100 miles of every one of our subscribers, and when the brood is taken from the hive just before the mail is put up, and then removed on its arrival, there can be little chance of failure.

MR. A. I. ROOT, Dear Sir:—I have tried the Royal jelly on several virgin Queens, but it will not make them acceptable to a strange colony—have tried perhaps a hundred times to introduce virgin Queens, but have never succeeded in one single instance and don't believe it can be done. Since writing the above, I see on page 52, Vol. 3—you hold out the idea that it can be done. Please tell how in your next issue.

JOHN F. LAFFERTY, Martinsville, Ill. July 5th, '75.

We only gave the idea of Royal Jelly, because it was odd, not thinking any one would place very much dependance on it, and are not astonished at your failure; but friend L., we are astonished and pained at your closing remark, if you really mean to doubt the testimony of so many others. So many have written us, that they were having almost invariable success with virgin Queens that we have not thought it worth while to publish the statements. That a Queen several days old will be stung as an intruder almost invariably, we are well aware, and have so stated most particularly. It has for a long time been universally conceded that a Queen is all right where she is hatched, even if the cell be so introduced that she is hatched in one hour or less after the old Queen is removed. During our experiment detailed in Vol. 1, we fell to thinking that it was beyond reason that every bee in the hive knew whether a young Queen was hatched there, or came there by other means; and a few experiments convinced us that it was age only, that made this great difference. If any of our readers will take a Queen of but few hours old, and before she has been running among the bees of any hive, they will find that she can be put any where, and will be unmolested, (even if there be a Queen already in the hive), until she gets old enough to show her Royal blood.

Many of you know that if you can find a lot of cells, just hatching, you can cut out the perfectly formed Queens with a pen knife, and they will be received precisely as any young bees just hatched out, for you can put them in any hive with impunity.

We are now just about rearing 36 Queens for our house Apiary, and as a means of safety shall have them all hatched in our lamp nursery. All the care needed is to be sure and put them among the bees before they are more than about 12 hours old. The loss is much less than that of inserting cells, and we have no cutting of combs to do, besides the great saving of time, in not being obliged to keep the bees Queenless at all; in fact we do not divide the colony until the Queen for it is hatched.

DEAR GLEANINGS:—My 10 Langstroth hives, bought last Aug. for \$40.00, have increased to 20, and have furnished *honey* enough to pay for themselves, the extractor, (Windsor's No. 2), and knife. Can any other investment pay like that? But now comes a difficulty: the moths, in spite of all my care, have got into nearly all my hives, and are wading through the combs behind the young bees, leaving them uncapped and mostly dead; are these the ordinary moths? If so, how am I to remedy the difficulty? I have taken

a tenaculum from my surgical instruments, and nicked out the uncapped bees from the three weak hives, in which they have done the most damage—destroying the moths as I found them. They are mostly small, 1-16 to $\frac{1}{4}$ of an inch in length. If you can give me any instructions in GLEANINGS, they will benefit others as well as myself, for I know my only bee-keeping neighbor is afflicted in the same way.

Yours fraternally, J. H. ONEY, M. D.
Dixon's Springs, Tenn. July 6th, '75.

Pick out the worms as you have been doing, with some sharp pointed instrument, and they will soon be all gone. We should infer from the manner in which they work, that your combs have been destitute of bees some time within the past season, and thus allowed a moth to deposit the eggs. Finally, get some of the newly imported Italian stock, and they will do all the picking for you, and only seem to relish the idea of cleaning out an infested hive.

I built a small house three years ago for an experiment; it is about 15 feet long, 6 feet wide, with 12 double hives. The house and hives are all built together. The bees work outside, I work inside. I have used it three winters, and have not lost a good swarm yet. I have the extractor in there, and disturb no bees but the ones I am handling, and no bees disturb me. I think nearly one-half the labor is saved. If you will try a small house for an experiment, I will give you a full description. *No patent.*

B. I. TALBOT, Viola, Iowa, June 26th, '75.

It seems from the above that there really is nothing new under the sun. In a second communication Mr. T. states that the house really answers the purpose for the extractor without any trouble whatever.

A. I. ROOT:—In extracting from a two story hive, to-day, I found so much brood in the upper story that I carefully measured and computed the entire surface occupied by eggs and brood, and found 2300 square inches thus occupied; proving conclusively, that the Queen was laying more than 3000 eggs each day. I have several other swarms doing equally well.

G. E. CORBIN, St. Johns, Mich. July 1st, '75.

Very glad to receive such reports.

A. I. ROOT & Co:—Our Linden harvest has just closed, which for a few days was good. I commenced extracting July 5th, and several of my hives yielded over 100 lbs., some averaging as high as 14 lbs. daily; have taken about 2000 lbs.

S. D. McLEAN, Calleoka, Tenn. July 13th, '75.

A. I. ROOT, Dear Sir:—The Extractor I got of you is a good thing; I transferred two cards of honey 2 $\frac{1}{2}$ inches thick, mostly granulated, and threw it out with the machine. I turned very fast, and doubt if ever a machine stood a harder test. It is very different from the one you sent me before, by which I see you have made great improvements in two years. Just keep on making this style of machine, and it will not take the people long to find out who makes the best article.

P. S.—I have just finished throwing out 75 lbs. of the same kind of honey. I am sure I turned three times as fast as the Peabody, or any other revolving can machine could be turned, and yet it stood the test.

As for the knife, I place my index finger under the point of the blade, spring it into the desired curve, and scallop out hollow places as well as a curve pointed blade, then letting it straighten finishes the work BRAVO! Let those who choose, use a thick, clumsy knife because it's cheaper. I am satisfied with a dollar knife.

Truly yours, DR. C. M. JOSLIN.
St. Charles, Mich. July 14th, '75.

DEAR NOVICE:—During April and May our bees travelled down hill, till we reached 58, and began to think of "Blasted Hopes." But at this point the grade changed, and we are now, at 85, going up. Some stocks are doing little or nothing in their boxes; others are filling up the second set with an A. No. 1 article. The sight of from 9 to 18 boxes of such comb honey on a hive is enough to make almost any one wish to try its qualities, and the uninformed to exclaim "Oh my!"

D. P. LANE, Keshkonong, Wis. July 12th, '75.

Last spring I bought 5 swarms in old Langstroth hives for \$20.00. Lost one swarm about the 20th of March, by being robbed. Transferred the remaining 4 into hives of my own get up, using the Standard frame, and ten frames in a hive, but think that 15 or 20 frames would be better, as these would give more room for brood. I now have 8 swarms (all black bees, three natural and one artificial. Have an extractor, it works well. I like to handle bees, but any young and inexperienced; the more they sting me the better I like them. Do not use smoke much, think it makes them cross. Ants are a plague here, as the soil is gravelly and good to build hills in they are very thick, and run into the hives, and help themselves to all the honey they like without much to fear from the bees. Will Novice or some other bee-keeper who has been bothered with black and red ants please tell us if Italians will keep them out? Bees are doing well here this summer as there is plenty of white clover. Please tell us what extracted honey is worth in Mason's cans, and oblige a young bee-keeper. A. L. W.

A very strong colony of Italians will keep even the inmates of a "strong" ant hill at a distance, but it seems to take up a good deal of time on both sides, as quarrels generally do. The bees seldom if ever succeed in stinging an ant, and apparently being aware of the difficulties they have in contending with such foes, prefer to give them a wide berth, and to bear and forbear, with a patience quite commendable. After a time however, they often seem to think forbearance ceases to be a virtue, and then their plan of attack is a novel one indeed; when the ants will *not* keep on their own ground, and get provoking beyond endurance, they go at them in a perfect fury, and finding they can do nothing with their stings, in despair pick up the little pests, and carry them up in the air, and so far off that they are unable to ever get back again. We have not been able to find that the ants do very much damage so far as getting the honey is concerned, but they often start nests in the hive, in the spring when the colony is weak. The ants will industriously carry in bits of wood, grass, etc., for their nests, which the Italians as industriously carry out again. This contest goes on for some time, but the bees when they get strong, always carry the day. We pinched the head of a beautiful yellow Queen a few days ago, because she did not raise bees enough to crowd the ants out of the hive. Our imported stocks are especially active, in sending the ants "sky high"—that is, the last we saw of the ants, the bees were lugging them "skyward."

We have made a test of the following, on a large ant hill, and they seem for some reason to have "got scarce." Will our friends report further?

FRIEND NOVICE:—If any of your readers are still troubled with ants, just tell them that pulverized borax sprinkled about where they inhabit will drive them away successfully. This has proven of great value to me. Medley received, and it more than fills the bill, in fact it's just splendid. I would not take \$10.00 for mine if it was the last one.

E. A. SHELTON, Independence, Iowa, June 19, '75.

Our friend Moore of Binghamton, N. Y., says Persian Insect Powder, to be had at the drug stores, is admirable for keeping ants out of honey rooms, etc.; we do not find it in our town. We opine that the borax acts by dissolving in the moist earth, and thus making the spot disagreeable, which would not be the case if used in rooms. Common salt has been advised in a similar way. Boiling water is a hard and cruel remedy, yet might be excusable did it not also kill vegetation many times, in a way undesirable.

DEAR NOVICE:—This is the worst season in Cincinnati that bee-keepers have experienced since I joined the fraternity seven years ago. Some of my wives haven't a pound of honey, and at the same time it seems as if I never had such colonies ready for work; for the last week some of them have been killing the drones, so taking everything together the prospect is rather gloomy. Some Apiaries situated near linden groves have done very well, and one I know of has gathered a good supply of can raspberries. I am going to feed all mine enough to insure them against want or famine, and I think the fall pasture will be good, for I am sure weeds never had such a good time to grow in as they have had this summer. Sugar as a winter feed will run a good chance of being tested in this part of the country. Wintering has lost its dread around here since the introduction of mats: my 40 hives came through with the loss of two Queens. I should like to know how your hive did with the mat on. H. E. CURRY, Cincinnati, O., July 13, '75.

The colony covered by the mat wintered equally as well as those covered with quilts, but no better; we noticed one peculiarity of the mat, however; on lifting it up, the bees were always found clustered *on it*, while with the quilts, they were clustered down among the combs. As all colonies having quilts or mats were perfectly dry and clean, it was hard to decide in favor of either.

A poor season in this locality for bees; fruit blossoms were all killed. There were no locust blossoms, and white clover, which is our main dependence in this section for surplus honey, has amounted to nothing, but we expect it next year by the quantity, so we are keeping in good spirits with the expectation of a big flow of honey in '76. I think if No-vice had been at my place this season I could have convinced him in regard to my bees having too much pollen. It would have taken more than several stormy days to remove it. I had daughters of imported Queens too. My locality is different from yours, you have to use meal for early pollen, I do not; they collect it on the first fair days of spring that they can fly. Why do not bees gather more pollen than they need, as well as they gather more honey than they need?

A. J. FISHER, East Liverpool, O., July 15th, '75.

Quite right, friend F., a bee-keeper needs to cultivate patience and equanimity, he must be in readiness to take care of the honey when it comes, and he must also be prepared to make the best of extremes of weather, failure of the flowers to yield honey, etc., etc. So long as bees command the prices they do, colonies can be made at a good profit by sugar feeding; neither the bees nor their owner need remain idle, and when you once get all hands busily at work, you may be agreeably astonished at an unexpected flow of honey. Your abundance of pollen will be of very great advantage, for you can safely keep up brood-rearing until quite late, and as has been fully proven, see pages 50, 84, and 98, bees will rear brood in abundance when confined in their winter quarters, if supplied with plenty of pollen. Perhaps we that are less fortunate can afford to purchase it of you, if you will give your bees empty combs, and take out the filled ones. They can be safely kept over winter out of the hives, and freezing does no harm. This would be easier and perhaps cheaper than meal feeding and would enable us to be entirely independent of unseasonable weather in spring, so far as brood-rearing is concerned. With our house Apiary, it would work beautifully.

EDITOR GLEANINGS:—Please give your readers the best plan for securing straight worker surplus comb.

With aid of index, examine back volumes, but if you want all worker comb, mathematically correct, better than any bees ever made,

get the comb foundations advertised in this number. It is some bother to fasten them in the frames, but when you once get them, they are *beautiful*.

I am taking one barrel of honey per day.

D. A. JONES, Tecumseh, Ont., Can., July 13, '75.

The most prolific Queen in my Apiary will be three years old next October—you just ought to see her spread herself. She seems to bid defiance to "bee disease," cold winters, springs or anything else. I have introduced three virgin Queens this spring safely—lost one; cause, raised the honey board which excited the bees, and dropped her in while they were excited, the others I let crawl in at a hole in the honey board.

T. G. McGAW, Monmouth, Ills.

I commenced the season with four stands, 4800 hives, and they were very weak. All the bees on one stand, I could hold in my hands, and the others covered about three frames each. I had not a full set of combs for any of the hives, and yet they filled up and swarmed until I got about sick of the swarming. Have increased to 11 stands, and returned 3 more because I had got no more empty hives. Just getting honey enough to keep brood-rearing going nicely.

WALTER SENIOR, Evansville, West Va., July 13, '75.

Under such circumstances had you not better raise and sell bees, rather than honey?

DEAR NOVICE:—You are a brick! You have made yourself immortal. Your Medley has arrived; 'tis splendid. I greet all the races introduced by you, and say "here is my hand." "Some men are born great, some achieve greatness, and some have greatness thrust upon them," but you accidentally made yourself a great name, by studying up the Medley; every bee-keeper ought to have it.

W. W. SEDGWICK, Granville, O., July 16th, '75.

If our readers will excuse the above, we will try to say no more about the Medley.

I have frequently read in order to get bees to work in boxes to use small pieces of comb—a better plan and especially when one has not the comb, is to use wax guides, then give them a ladder to climb up by, starting from the entrance to centre of top of box—a small one-half inch piece of comb makes the best ladder—but a small *waxed* stick will answer. By using the ladder they will begin work much sooner, than if they have to climb the sides of box. Try it and see for yourself.

T. G. McGAW, Monmouth, Ills.

As the Italians are quite disposed to begin at the bottom and build their combs upward, we think these "ladders" would be quite an item, and the neatest and cheapest material for them would undoubtedly be the comb foundations. We presume Mr. Long will send these by mail, and at \$1.00 per lb., they certainly would be cheap enough for guides in boxes. One square foot like the sample sent us, weighs only 2½ ounces, so that we can calculate on something like 16c per square foot or \$1.60 for comb foundations enough to fill a single story L. hive, as each L. frame (with the metal corners) contains just about one square foot of comb. We think it very probable that the objection that has been urged that the Italians were more averse to working in boxes than the blacks, is only because they do not go up to the top of an empty box or hive, and hang in clusters as the blacks do. Mr. Langstroth remarked to us, that a strip of comb for a guide, would be much more efficient if placed on the *side* of the box instead of along the top in the old fashioned way, just because of this peculiar trait of the Italians. In fact they will under some circumstances build their combs upward until they topple over from their weight; when the blacks would have at once gone to the top and built downward.

On the 3rd of July as I was out ploughing close to a piece of woodland, I heard the bees making a big noise, and began to look around, and I saw them on the leaves gathering the Aphide honey, as I call it. The leaves were full of Aphides on the under side, and they ejected the honey so fast that I could see drop after drop fall down on the lower leaves. I took a double magnifier, which I always carry in my pocket, and found on some leaves over a hundred drops; then I took my knife and laid the blade on some of the largest Aphides, and they all had a drop of the same honey on their extremities, that there was on the leaves. I made an examination of all the trees and shrubs around; on spicewood I found no Aphides, and not a drop of honey. Under some trees the dead leaves on the ground were coated all over with something like varnish. Now I would like to see the man that can make me believe that it falls from heaven.

D. N. KERN, Shimersville, Pa.

We have seen precisely the same phenomena, and although all the honey dew that has come under our own observation, doubtless came from the Aphides, we should hardly feel excusable in saying that such was always the case, especially since others who apparently are equally faithful, have come to such a different conclusion.

There are hundreds of acres of white clover here in full bloom, and no bees to gather the honey. I have got one swarm left, and this is the case with nearly all the bee-keepers in Geauga Co. It made no difference what number of swarms they had last fall, all are reduced to one or two swarms, and they are not very good; those that had only two swarms saved one, and some that had one saved that one, while those that had 30 or 50 saved only one or two.

V. McBRIDE, Chardon, O.

I have to-day transferred a colony under your instructions in May No., with splendid success. I came near losing the Queen, however; when I had got all done, and was cleaning up, watching however, as I had not seen her, I found her in the grass by herself. She trotted happily in among her children on being put in front. This is all a new experience to me, but I am very much interested in the care and working of the bees.

L. S. ELLIS, Manistee, Mich. June 14th, '75.

Very glad to hear that we helped you, friend E., but we fear you only partially complied with our directions, if you allowed any grass to remain for her to get lost in. We certainly have had good reasons for so continually insisting that all grass and weeds be kept away from the hives, when transferring, extracting, etc.

In my account of the death of Emmett Fuller, in GLEANINGS for July, you misinterpret my abbreviation of the word President, (Pres't) and print it "Priest." This savors somewhat of Catholicism, toward which President Abbot does not in the least incline. G. E. CORBIN, St. Johns, Mich. July 3, '75.

We sincerely beg pardon, and shall have to admit that it was not until you pointed it out that we discovered what our compositor had done.

Queens can be sent safely to California by mail, see the following:

MR. OATMAN, Dear Sir:—The Queen you started the 17th came the 29th, all right. I am well pleased with her. E. E. SHATTUCK.

Los Angeles, Cal. June 30th, '75.

A. I. ROOT:—I notice in GLEANINGS for July, that Adam Grimm says his first natural swarm came out May 24th. Three days prior to that, (May 21st), a large natural swarm issued from my only box hive. I put it into a "frame hive" filled with empty worker comb. Just four weeks from that day I inspected them carefully, and found 15 or 1600 square inches of brood and eggs, and numerous Queen cells nearly ready to cap over, preparatory to a second attempt at emigration.

G. E. CORBIN, St. Johns, Mich. July 5th, '75.

In the above we think the empty combs should have a great share of the credit.

DEAR NOVICE:—I find in some of my hives worker *pupa* unsealed. The *pupa* have the shape of the perfect bee, yet are perfectly white except the eyes, which are of a dull bluish color. Have these *pupa* been sealed and again unsealed by the bees, or have they never been capped over? Will they come out and be as good as those which have been sealed and hatched in the natural way? How do you account for their being unsealed?

Again I find among naturally capped worker brood some cells lengthened and capped over as if they contained brood from a drone-laying Queen or a fertile worker. How do you account for them?

How do you determine whether a swarm has a drone-laying Queen or a fertile worker, finding the worker cells lengthened and containing drones, but not being able to find a Queen, who may nevertheless be there, or not?

Which is the best way of getting rid of a fertile worker, and supplying a hive thus affected with a Queen? Yours respectfully,

WM. MUTH-BASMESEN.

Los Angeles, Cal. June 29th, '75.

The phenomena mentioned of brood uncapped during very warm weather occurs every season, yet every little while some one notices it for the first time, and thinks there is something wrong, that the extractor has killed the brood, etc., etc. Rest assured the bees know perfectly well what they are doing, and have not forgotten how, or any thing of the kind. The lengthened cells are probably a part of the same phenomena.

We always make it a point to see every Queen in each hive, and to keep a kind of supervision over each young one, until she is laying worker eggs; drone eggs are never deposited with the regularity and system of worker eggs, but yet we cannot be perfectly sure, until the brood is capped, then the great difference between worker and drone brood is apparent at once. See Fertile Workers, on page 91, last number.

MESSRS. A. I. ROOT & CO.—Accepting with pleasure your kind offer, I beg leave to beg for a sample copy of your "GLEANINGS IN BEE CULTURE." We Germans here acknowledge freely the progressive spirit of America in all branches, particularly in industry and husbandry, and therefore are desirous to see how far you are advanced in the above named Culture, which we, as you well know, consider a science. The University Hall at Basle, the place where Sept. 15th, '74, was the Grand xix Bienenzuechten Vnderversammlung, could bear witness to it.

Very respectfully, A. LOTTMAN.

Weimar, Germany, June 20th, '75.

Many thanks friend L., for the very generous compliment you pay to our countrymen; we will try to deserve it. In saying that in our humble opinion bee culture could scarcely have become the substantial branch of industry that it now is, without the invention of the Honey Extractor, which your countryman gave us, we do you no more than justice. If we sometimes forget to accord the full credit due you, please excuse it on the ground that we simply need a reminder of something we are always disposed to agree on. Although two of the girls in our employ have procured the necessary books, and have essayed to learn German, we regret to say that our monthly copy of the *Bienen Zeitung* is usually filed away without giving us any enlightenment as to what our worthy cousins across the water are doing. Rest assured that there is at least one in America, who only awaits a fitting opportunity of showing his good will towards your people.

P. S.—It is with some trepidation that we put the long word in print that our girls assure us means nothing more than "Bee-Keeper's Convention."

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal (\$2.00).....	\$2.25
" The Bee Keeper's Magazine (1.50).....	2.00
" The Bee World (2.00).....	2.25
" All three, The Bee Journals of America.....	5.00
" American Agriculturist (\$1.60).....	\$2.10
" Prairie Farmer (\$2.15).....	2.65
" Rural New Yorker (\$2.50).....	3.00
" Scientific American (\$3.15).....	3.65
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Books for Bee-Keepers.

SENT postpaid on receipt of price.

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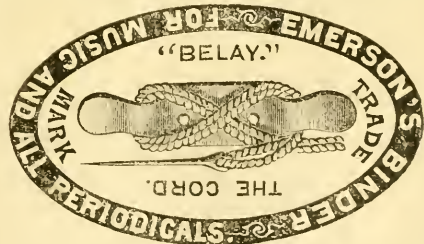
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A. I. ROOT, Medina, O.

GLEANINGS

IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees. Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO.

BY A. I. ROOT.

Vol. III

September, 1875.

No. 9

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Southern Farmer,

Scientific American.

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ARTIFICIAL HONEY COMB FOUNDATIONS. A GRAND SUCCESS.

MANUFACTURED

6 Inches (or less) wide,

And 16 Inches (or less) long.

Cells one-sixteenth inch deep.

One Dollar per Pound.

MONEY MUST ACCOMPANY ORDERS.

JOHN LONG,

Box 6, Station C,

NEW YORK CITY.

Artificial Honey Comb Foundations.

I read the works on Bee Culture, the following:

"To form one pound of wax, twenty pounds of honey are required."—*Liebig*.

"Careful experiments prove that from thirteen to twenty pounds of honey are required to make a single pound of wax. * * * Many bee-keepers are unaware of the value of empty combs: suppose honey to be worth only fifteen cents per pound, and the comb when rendered into wax to be worth thirty cents, the apiarian who melts a pound of comb loses largely by the operation, even without estimating the time his bees have consumed in building it. It should therefore be considered a first principle in bee culture never to melt good combs. One pound of beeswax might be made to store twenty pounds of honey; and the bee-keeper would gain the difference in value between one pound of wax, and the honey which the bees consume in making a pound of comb."—*Langstroth*.

"Wax is not gathered like honey, or pollen, or propolis. If bees could gather it, it would cost them less than it does. They have to manufacture it at a very great expense to themselves and their owners."—*Pettigrew*.

"Wax is the most expensive article used by the bees. * * * The time spent in constructing the comb should also be taken into account, which if occupied in gathering honey, would at this season of the year enable them to store much more, and making the cost of a pound of comb, equivalent to at least twenty-five pounds of honey. This honey at twenty-five cents a pound, would give us six dollars and twenty-five cents, as the cost of a pound of comb. Good combs melted into wax and taken into market, might bring forty cents a pound, which deducted from the cost price, would show a loss of five dollars and eighty-five cents on every pound of wax sold. These estimates show, that the bee-keepers cannot afford to melt down any combs that can be used to advantage."—*King*.

Impressed with the importance of an Artificial Comb Foundation, I constructed a machine for making them, samples of which I sent prominent apiarians with the following result.

MR. JOHN LONG, Dear Sir:—I submitted your Artificial Comb Foundations to a practical test and found them acceptable to the bees, and I think are destined to entire success. When the bees commence to build their combs only very few can work, and it is not until considerable progress has been made that they can unite their efforts. I filled all my surplus boxes with your foundations, having first bathed them with a solution of honey and water; the bees all went to work and the combs swelled out as by magic. Its success will depend on the price.

Respectfully, AARON PENNINGTON, N. Y.

MR. JOHN LONG, Dear Sir:

ST. JOHNSVILLE, MAY 18TH, 1875.

The experiments I have tried have proved a success; all that I anticipated. I have satisfied myself that the Foundation Comb will prove an acquisition.

Yours, M. QUINBY.

MR. JOHN LONG:

CHERRY VALLEY, MAY 3D, 1875.

* I am inclined to a favorable opinion of your Foundations, and shall watch the practical test with great interest, for if it proves practicable, I shall consider it a great acquisition to the bee business.

Very Truly Yours, J. E. HETHERINGTON.

MR. JOHN LONG:

DES MOINES, IOWA.

I have tested your Foundation Combs, and am more than pleased with the result; they are as perfect as can be.

ELLEN S. TUFTER.

30 QUEENS FOR \$30.

Owing to the failure of the principal honey flowers, I have concluded to raise Queens, and will sell untested Queens, raised from Imported Mothers, at \$1 each, sent by mail. I will sell nuclei in full sized hives containing nine frames, 10x17 inches, with three combs of brood and bees and "dollar" Queens for \$6 each, delivered at Express office. Can be shipped any time and built up in full colonies.

74cd

H. NESBIT, Cynthiaana, Ky.

13 SEPTEMBER PRICE— —LIST FOR QUEENS. 13

During the month of September we will send
13 ITALIAN QUEENS,
very handsome, large and prolific, for \$12.00. All
QUEENS WARRANTED PURE, AND SAFE
ARRIVAL GUARANTEED BY MAIL.

Any number less than 13 one dollar each.

H. ALLEY, Wenham, Essex Co., Mass.

You speak in July No., of those who recommend packing for winter, and advise them to go slow; now I don't consider packing absolutely necessary for winter, but if you want to carry your bees through such a severe spring as the last, and not have them dwindle, I know of no way to do it so certainly, as to pack them in the way I described, and not disturb in the spring any more than enough to prove that they have everything in good order. It takes no longer to pack them in the fall, and the packing does no harm through the winter, and may be a great benefit.

If there should be much changeable weather. The first warm weather in May, the 15th or 20th as it may be, go at them "hammer and tongs," and get their combs full as soon as possible, handle every day if necessary, and not less than twice a week; equalize brood, get all strong by the time the yield comes; get the 8 or 9 frames so packed with brood, that when the honey comes it must go into the boxes. Then when they commence in the boxes, handle no more brood unless they swarm out.

J. P. MOORE, Binghampton, N. Y., Aug., 3d '75

Are you not a little vehement, friend M.? We, at least, did not mean to say bees would not sting in the house Apiary, but bless your heart, you don't mean to say they will sting when the outer glass doors are shut? *Robbers* very frequently *try* to follow us as they often *do* follow a person out of doors; but as soon as they find themselves imprisoned they immediately devote themselves to trying to get thro' the glass; and whether it rains or shines we cut out brood, open hives and do whatever we please, regardless of robbers or anything else.

It seems that your hives cannot be like ours, or you would not speak of "less trouble"; does it not lessen labor to dispense *permanently* with all covers and one side of *all* the hives? The very plan you refer to, it seems to us, will answer beautifully in the house, and by swinging open the large doors we can at any time be *almost* as much out of doors as if we had no house.

If it should ever be decided that it is safe to undertake wintering bees out of doors, we admit the house to be an expense; but if you are going to build a wintering house or cellar, and hives besides, the expense is undeniably in favor of building them all in one. Again, how *can* bees possibly be packed for spring at so little expense, and at the same time receive all the benefit of the collective warmth of so many colonies, as in the house Apiary, where they can fly at pleasure in any season, should a suitable day offer? We are very much obliged for your kind hints in regard to getting box honey, and hope to profit by them.

I want a house to winter in, and find by making it 8 square with space for two tiers of four hives each, the saving of lumber in 48 hives over the hives for out-doors, will make the house; am inclined to try the experiment. Have tried hatching Queens in the lamp nursery, and have succeeded finely; I find it the easiest way hatching and introducing.

J. B. KEELER, Carlinville, Ills.

Next season I shall establish another Apiary, and as it must be 6 miles away from home, (next station on the R. R.), I am thinking strongly of a "house Apiary." I think now I should build square, for corners cost more than lumber, in this "wooden country." I favor 1 foot walls, only just in front of the hives; then, 4 inches, and some thin fixed around each entrance to keep my clipped Queen in the hive during swarming time, *a la* Langstroth and Quinby. I shall arrange exclusively for *comb* honey.

JAMES REDDON, Dowagiac, Mich.

We do not think 6 miles necessary; after taking considerable pains, we have satisfied ourselves that our bees seldom work more than $1\frac{1}{2}$ miles from home, and we shall start another house Apiary $2\frac{1}{2}$ miles from home next season as soon as we ascertain that the house will winter them as successfully as it answers for other purposes. Our objection to having it square is that the bees are not so easily driven out.

As ours is, the walls always present an inclined plane toward the doors, offering every inducement to them to "slide out"; if large doors were put directly in opposite corners of a square house, it might do equally well; but then you

would have so many hives in a straight row that the bees and Queens would not so readily find their own hives. We are inclined to think now that not a Queen has been lost in making her bridal trip. Of the 18 on the south side not one has been lost at all from any cause. The 4 in. walls with the dead air spaces, we think, will keep out more frost than 1 ft. saw dust walls. The contracted entrances, we believe, only result in having the old Queens killed; it was a long time ago that Mr. L. thought they might be a success. We think the house must prove very desirable for comb honey, on account of the very warm and even temperature; a very little feeding keeping up comb-building, no matter how cool the nights may be.

NOVICE.—In 1862, during the war in Dixie, I was ordered to Richmond, Va.; while on my way home, I stopped over, for a day, at a little station near Atlanta, Ga.; the hotel-keeper had some fine honey on the table, and being a bee man, I was at once interested. I asked him to let me look at his Apiary; he showed me a house about 10 feet high, with about 16 sides; each side was divided into 4 spaces or squares, each square painted with different colors, and at the entrances to the hives there were steps about 6 inches wide. On going inside, the hives were ranged on shelves 4 high, the hives were about the size of the Simplicity two story; the upper story was 3 sections, or 3 large frames, lower story, same as a box hive, with a fixed honey board, and a 2 inch hole, going into each section; after showing me the arrangement of the hives, he closed the door,—all was then dark,—removed a section, carried it to a little trap door, and placed it on a shelf, opened the trap door, blew some cigar smoke on the bees, and in a few minutes all of the bees were gone. This mode of keeping bees was a great surprise to me, and I was delighted with it. It was my intention to build a house of the same kind on a small scale, to test it, but my profession prevented my doing so, but I intend it next year when I quit the city, and go on my farm; but I presume you will have tested it by that time. So your idea is *thirteen years old* to my knowledge; this hotel-keeper was the "King bee man" in that country, as he never lost bees, and raised plenty of honey.

A. J. MURRAY, Memphis, Tenn.

LOADING BEES.

BY A. C. KENDALL, OF FIRM OF B. H. STAIR & CO.

MR. NOVICE, Dear Sir:—In GLEANINGS for Aug. we notice you thought bees hanging out were wasting time; this is the very subject we have been wishing for several months to write to you about. You probably remember we are a bee-keeper on a small scale, having only 5 to 6 swarms, and our lot being cast in the city of Cleveland we have not been able to increase, as the colonies are kept weak by the members going away to the many amusements and temptations of city life, by getting into confectioners' stores, etc., where their exit is not always certain.

Years ago when our little farm, which is now in the heart of the city, was in the suburbs, as we then 't, our 5 to 6 colonies gave us about \$40 worth annually of beautiful white box honey in excess of what we, with the assistance of our friends, could eat. At that time we observed a large lot of bees hanging out at one of our strong swarms, and having half an hour leisure, we watched them closely and came to the same conclusion that you did, that they were idling away their time when the harvest was ripe; besides this we saw that many bees coming in laden with honey were intercepted outside, and they would kindly give up their earnings to these idlers, all this too whilst the boxes were empty; we thought "here my boys, this will not do, no use in fooling away your time in this way, at the end of June." We got a dust pan and turkey's wing, which later, by the way, is not a tool to be despised, took the cover off their Langstroth hive, took the glass out of the ends of the two large 20 lb. boxes, brushed the cluster on to the dust pan and poured them into the empty boxes; in three days all the combs were started, and in about ten days the boxes were full and sealed.

We think if you had filled your second story with empty combs or frames, and poured these idlers in, they would have gone to work readily.

Cleveland, O., Aug. 7th, '75.

Just the point exactly, but in our case the upper story was full of bees too, and after we had carried enough away to make a good colony still they hung out. As there was no honey to be gathered or at least very little, they were perhaps somewhat more excusable, but it is our opinion that a surplus of bees can always be profitably kept busy at something, and this is the way we do it. Now these remarks are intended for every one of our readers who have bees loafing on the outside of the hives when this number reaches them. To be sure we cannot set them to gathering honey when there is none, but we can raise bees which just now bring money full as readily as honey; and whenever a good colony of bees can be sold for \$5.00, we think it will pay well to raise them during the warm months of the year even if we have to feed daily to do it.

As robbing is the great evil to avoid at such times, we will work a little differently from the plan given on page 87. Go to any colony having bees on the outside of the hive, and after having frightened them with a little smoke, brush all these outsiders gently on the ground with a quill; now quickly remove the hive before they have time to crawl back again, and put another in its stead.

If you have empty combs with which to furnish this new hive, the work is very quickly done, for we have only to give them a small piece of brood from our imported or choice colony, and the work is done—no robbers being able to gain an entrance, for they are at home, and neither can any trouble the parent stock, for they are always full of brood and bees, before they begin to hang out.

In case you have no surplus combs, you should start the colony much earlier, say in July or August; it seems very probable that the Comb Foundations would be a great aid, and we hope to report the result of some such experiments before we go to press. Now about the feeding: keep your brood or Queen cells to the south side of the hive, and the Universal feeder to the north side. You must fix the quilt so that no bees can get above it, and get into the feed from above. Also, you must get *duck* for them like the sample that we furnish; common sheeting will do for a little while, but they soon gnaw through it, and this makes trouble.

When the Queen gets to laying if you should find that any of them have too few bees to care for the brood, you of course must give them frames of brood—no bees—from such as can spare it. While we would give every colony a piece of choice brood *and no other*, we would also give them Queen cells as soon as we had them. Should they tear down these cells, or any other accident happen to them, they will always have this brood to fall back on, and all cells built will be good ones, if we want to use them.

"KATIE GRIMM."

M. R. A. L. ROOT, Dear Sir:—It seems as though many doubt yet that I could extract so much honey in so short a time, and I blame no one for doubting. I believe it would seem strange to me if I had not done it myself. I hardly think the extractor or myself deserves credit as much as my dear little bees, and the good honey season do. My extractor was similar to the Chapman's improved honey Extractor, it was four cornered instead of round, and

held quite a lot of honey in it below, so that I could extract two full double hives without stopping to take the honey out of the machine. It is not so hard to do as you perhaps think it is, and were I where I was then, and had everything just like then, it would give me great pleasure to do the same work over.

Bees do not find much honey in the basswood here, they work more at white clover, basswood is nothing in comparison to what it was at Jefferson.

Yours respectfully, MRS. H. GIESLER.
Green Bay, Wis., July 26th, '75.

We feel quite sure, Mrs. G., that no one doubts your plain honest statement, unless it be that class who are in the habit of judging others by themselves, and perhaps they have never felt the real pleasure of developing all the latent strength and energy that they never knew they possessed, until some praise-worthy undertaking had called it out.

To our new readers we would say that in the year '71, our friend "Katie", alone and unaided, extracted 10 bbls. of honey in a little more than 2 weeks, and *two barrels* in one day on one occasion. See A. B. J. for 1871, page 53.

Now although this was done with a stationary can extractor, she was obliged to empty it every little while, and this all alone; and we wish to say here that we would under no circumstances be obliged to stop work to pour out the honey. Besides, if it is run directly into the barrels as fast as extracted, there is no necessity of making our cans so deep; therefore, we can easily have them small enough to stand over a barrel or anything else convenient, and they are also much lighter and easier to handle. It will be observed that the lower priced machines in our list are of this description.

WHAT IS A SWARM OF BEES WORTH?

DOLLAR Queens are fully established and are proving a great blessing to thousands, and now the principal want is bees, for a small amount of money, to go with them. On page 4, Vol. 2, we considered this matter, but since then we think we can raise bees a little cheaper. We believe the price on Queens is pretty well agreed upon, viz., \$1.00 for untested fertile Queen from imported mother, and \$3.00 for the same tested. Well we can build up a colony with safety from two combs filled with brood, and covered with bees; and the express charges are very much less on them than on a whole colony. Who will furnish them the cheapest? The empty combs can be furnished with the aid of the foundations—even if we have to feed to get them made—safely for 50c. each, and then comes the great point to decide what the bees and brood are worth. If we have to feed to get them it may cost altogether, 50c. per comb more, so that we start out with the estimate that a comb filled with brood and covered with bees is worth \$1.00. Now if we put a tested Queen with these two combs, we have \$5.00 for the nucleus, or \$3.00 if for an untested Queen. As it is some trouble to prepare these for shipping, we will say \$1.00 more on each, unless 5 or more are taken at one time. We need hardly add that these nuclei are very much safer in the hands of new beginners, than Queens that are to be introduced, for we have many times felt that some who send off and get Queens are so utterly uninformed in regard to the habits of bees, that it would be almost a miracle if they were *not* lost, whereas these nuclei would be comparatively *safe* with them.

OUR OWN APIARY.

AUGUST 7th.—You can readily imagine that after our last, we very soon again made the trial of handling bees by lamp light, and have been most agreeably surprised to find that hives can be overhauled, Queens hunted, combs inspected for eggs, etc., etc., and in fact it really seems as if those whose occupations demand all their time during the day, might give their pets all needful attentions, *almost*, after dark. The lesson we had in robbing ought to last us some time, and we must repeat what we have before said, that it seems to us that nothing in the world has so much to do with the danger of getting stung, as letting bees get a taste of stolen sweets from other hives. There is one feature in subduing bees that we do not remember to have seen mentioned. To illustrate: yesterday we found on going into the Apiary that our Quinby smoker had been left up street, but as it was desirable to see if some Queens had commenced laying, we concluded to try to get along without it, even though the bees were very cross indeed when last handled. The first colony opened seemed so perfectly gentle that we were most agreeably disappointed, and proceeded to open quite a number with the same result, until we came to one that had only a few days previous resisted the combined efforts of both Mrs. N. and ourself. Imagine our surprise at finding them so gentle that we actually took the frame containing the Queen and carried it into the house, Mrs. N. hardly crediting our assertion that this was the selfsame colony that would not be quieted, even with the Quinby smoker. Now this is nothing especially new, for we have several times observed the same thing in the fall of the year, that bees can at times be handled much better without smoke than with it. Of course we must work slowly and be gentle with them, and should anything occur to rouse their combativeness, it may be necessary to use smoke to drive them back, but the idea is that if you can get along without a "regular tussle" to see who is master, it is much the better way. There are times when it seems that smoke only arouses their vindictiveness, and keeps them down among the combs only so long as we keep a regular stream of smoke playing on them, and woe betide you if you happen to stop until they should gain the ascendancy. Perhaps the better way will be to light your smoker, and have it all in nice trim, near by, then handle them without smoke if you can.

Aug. 9th—We cannot remember that we ever before had more bees than we knew what to do with, they now hang in great clusters on the fronts of the hives, sometimes even a peck or more, and we have had quite a time in getting these "loafers" to go to work. Taking away a part of their brood does not seem to answer always, and in fact taking *all* the brood does not always start them into the hive where they belong, but moving the hive entirely away, and giving them only empty combs with some brood, without their Queen seems to have the desired effect at once. Of course we have no honey coming in now, at least none of any account, and here comes in something a little strange. We have one colony that has for 3

years past invariably gathered honey when others were doing almost nothing; so well have we become accustomed to this, that we have learned to expect it, and a few days ago took all their combs away, giving nothing but dry combs, and these only partially built down at that, but to-day they have actually, besides building some comb, filled four combs with sealed brood. To be sure they have scarcely a spoonful of honey in the hive, but yet they must have gathered considerable from some source. Now as the suspended hive, as well as nearly all the rest, are not gaining an ounce, are we not correct in thinking these bees extra laborers? They are hybrids, and although as nice to handle as need be during a yield of honey, they are now perfect little "heathens" to sting, probably thinking they have had all the indignities at our hands, since taking their combs away, that they are going to endure. By careful watching we have discovered how they get honey when others do not; very early in the morning when no other bees are stirring these are found quite busy; at present they are working on the pumpkin, cucumber, and melon vines, etc., and perhaps they get some by robbing, which may account for some of their crossness. We have reared three Queens from this colony, and if their progeny show the same peculiarity, we shall think them an acquisition.

The house Apiary is doing very well so far, but it were no more than fair to state that three of the young Queens hatched in the lamp nursery, were found with bad wings; whether this was caused by their mode of hatching, we are unable to say, no such difficulty was noticed last season. Five more of the 36 were lost in fertilization, but as the weather has been *extremely* bad, perhaps this is not to be wondered at.

Aug. 10th—We observe that the colonies in the house Apiary are much the busiest carrying in pollen, while those outside seem most eager for honey. The reason is probably that owing to our method of making colonies those in doors have plenty of honey and no pollen, while out doors it is just the reverse, and the very heavy colonies outside that have an abundance of *both* honey and pollen are very much inclined to do nothing at all. Colonies left alone on the old fashioned plan, really spend months in doing nothing, while new swarms started on the plan we have given work with the most commendable diligence in bringing honey and pollen to build themselves up. Now we believe that successful wintering depends much upon keeping all hands actively employed during the entire summer and fall; by far our best stocks this spring were those kept so employed last season. On this account an increase of colonies after the main honey season is over, is more desirable than otherwise, but the matter must have careful attention, and if they cannot gather enough honey to build up, they of course must be fed. Pollen they usually find, we believe, when they want it; but if they do not they will use the rye meal even in the fall, as our experiments of last fall showed; but do not for a moment lose sight of the great fundamental rule, to make all strong at whatever cost. Get as many bees in each as can crowd into a 10 frame hive.

It may not be known to all our readers that bees will not drown in a feeder where the sides are not more than one-half inch apart, in fact there is but little danger where they are even an inch or more, if the sides are rough so the bees do not slip. Now we will tell you of a pretty little experiment that we have just been making: in making one of our new colonies we inadvertently placed a brood comb next the glass division board, and also left a space between the two large enough for a comb. When the young Queen became fertile the very nicest thing to do, "of course," was to start a tiny white comb. Now as no honey was coming in, this could not continue long, but for the benefit of "blue eyes" and the rest of the children we made a feeder by placing a tin trough a little longer than the frame, 13 $\frac{3}{8}$ inches wide and about 2 $\frac{1}{2}$ deep, so placed that the bottom bar of the frame hung directly in it. This you will observe was all close to the glass, right in front of the "spectators" in fact, and the way these beautiful regular worker-combs do grow, is truly worth witnessing, even with a very small amount of feed. During the past rainy weather we hardly know how we should have contented ourselves had it not been for the "house Apiary."

Aug. 24th.—But it *would* just do you all good to see how the house Apiary works with the comb foundations. You see we have had some very wet, cool weather, and the bees out doors have ceased operations of all kinds, yet by feeding, and with the aid given by the lamp nursery in the way of an even temperature of about 75 degrees, we are enabled to push along brood-rearing with a speed and certainty that is truly soothing to the feelings of one who has worked so long for the accomplishment of this very point, viz, being enabled to work independent of the caprices of the weather.

We procured 10 lbs. of the foundations, and by the way Mr. Long strangely forgets how closely we bee-keepers are obliged to economize, when he sends the above quantity by express in *two* separate packages. Again, one of our readers sent him \$1.00, ordering it to be sent by mail; instead of doing this he sent it by express at an expense of \$1.30; whereas the whole expense by mail would not have exceeded 20c; we presume it was the duty of our friend to have remitted the 20c for postage, with the \$1.00. We mention this that thoughtless people may avoid giving themselves and friends needless trouble and expense in future.

Now in regard to the foundations: we have made several very careful experiments, and we are well satisfied that the bees will raise the most beautiful light combs in much less time than it takes them to build new, and what is still more important is that they make the entire comb from the material furnished in the foundations. We determined this by giving them a comb or sheet made of two different pieces, one of white and one of yellow wax; the cells when raised to their full length were of the color of the original foundations clear to the top. The white sheets furnished by Mr. L. are raised into combs of a delicacy, whiteness, and beauty that make the finest specimens of comb made by the bees look cheap and awkward when compared to it.

Just imagine yourself a visitor, invited into

the house Apiary; as we raise the quilt covering the glass division boards you will see the bees so intent on their work that they do not seem inclined to pay the least attention to our interruption, and we may even uncover the top, and lift out the combs, if we move back the glass side a little, and work gently, without a single bee leaving the combs, and perhaps we may also see the Queen continue to deposit eggs while the comb is held up for inspection. In fact they behave just as you have seen them in June, although should we try to do the same thing outside, we should be beset by robbers at once. The secret is, that we have just such a temperature for comb building as we wish, they are supplied with food just about as they get it naturally, and no robber can by any possibility annoy either ourselves or the bees during any of the necessary operations of opening the hives, feeding, hunting Queens or eggs, etc., etc.

Now all this is done during weather in which the bees can fly outside, and to be frank, we really know of no way in which they could be handled thus, in *cold* weather, for when the glass doors are shut we always have more or less bees collecting on these windows, that are to be released and allowed to go home—to their own "auger holes"—as soon as we open the doors to go out. It is our opinion that bees should not be handled in a house Apiary, only when the weather is such that they *can* go home. Of course a bee could fly such a short distance to its home, even in rather cool weather.

Notwithstanding all we are saying in favor of this house, we hope no one will go to investing largely in it until we have given it at least a trial for one whole year. It may turn out like the "glass house" before next June, and we haven't forgotten the money that that cost: does any body want to buy some hot-bed sash very cheap?

About 10 days ago we thought we had better have a few more Queen cells for emergencies, and to get bees we lifted an empty story from one of the two-story hives. As the quilt had been put down hastily, we found a quart or two of bees loafing on the inner sides of this hive. They were all carried carefully to the new stand and then some combs were taken from two other hives, these also covered with bees, thus having bees from three different stocks. Nothing was given them but a small piece of brood such as we send by mail for 25c, yet they built *twenty-four* large fine Queen cells, and large fine Queens are now hatching from them in the nursery.

Is it not true that by taking bees from *several* hives we get more and finer Queen cells?

It is of no use to write to us for Queens, we *cannot* undertake this in addition to our other duties. We tell of what we have done only to show how easy it all is; could you see the heap of unanswered letters on our table this minute, you would not wonder that we fear to assume more responsibilities.

Aug. 25th.—We purchased an imported Queen of Dadant about the middle of June; only gave her 4 combs of hatching brood to "set up house-keeping with." Well, she soon filled her hive, and when we started the house Apiary we divided the colony and put her in

the house, so that we could sell pieces of brood without opening the hives in the rain—it rains every day *this* summer, here. Now, notwithstanding we have cut out nearly all the brood sold from this colony—she has always seemed to have more to spare than the other, and besides, her Queens are lighter colored, but this last is perhaps an accidental quality,—she has so filled her 10 frames with bees that they need more room, and what do you suppose we are going to do? We are going to put over the colony some of those nice boxes, made all of glass and tin, and put in guide combs of the new foundations, and see how the foundations are going to answer for box honey. We have never fed this colony until quite lately, but we now propose to give them a chance. The feeder used will be the tin trough, made wide enough for three frames to hang in it. Were it not for the inconvenience of filling this, we might think it in danger of superseding the Universal feeder, but with the movable side as we have the hives in the house Apiary, this objection is partially remedied. By taking a little trouble to fix the hives for it, it may be the most desirable feeder after all.

Aug. 26th.—Thirteen Queens hatched last night in the nursery, and the funniest part of it is, that *ten* of them were running around together, sometimes clustering like bees, yet not a Queen was injured in the least. The only way we can account for this at all is, that there were no worker bees present. If you think these Queens were not strong and lively, you should have seen them run when we attempted to catch them in order to cage them.

Aug. 28th.—Our Apiary is now composed of 107 col—beg pardon, hives with bees in 'em. We are perfectly well aware that it is very poor economy to make colonies, and then have a large per cent of them die before another season, but the Queens *would* hatch, and the bees would increase so their hives wouldn't hold them, and because we pitied (?) them we have made the above increase. We intend to select the best Queens, and unite them down to 100 or less.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT.

EDITOR AND PROPRIETOR.

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, SEPT. 1, 1875.

If any man will do his will, he shall know of the doctrine, whether it be of God, or whether I speak of myself.—John, vii, 17.

FRIEND Math gave directions for cleaning honey jars with sal-soda and shot; our compositor got the last article "silk."

Now is the time to feed for winter if any such work is to be done. Bees *must* be got in condition so that they can be let alone when frosty weather comes.

Those who are still fassing with moth-millers should compare the letter on page 105, with the one from the same gentleman on page 117 of this number. His experience is only one among thousands of similar cases.

TEN cents postage must be paid on Queens and all implements etc., going to Canada, and the weight must not exceed 8 oz. The postage on letters, papers and books, are the same as our rates, but merchandise is as above.

SOME one of our number wrote that if a small hole be punched in the lower end of the Quinby smoker to let in air, the fire would not go out so readily; since our own has got "rickety," it does not trouble us as it formerly did, in that way.

A SUDDEN flood of honey—in some cases the first of the season—has come to our Western friends, and now they are writing to know what they shall do when the combs are all full, and the honey too thin to extract. Give them a larger hive and more empty combs, and see page 90.

FRIENDS some of our correspondents will rejoice to know that we have procured a *Type-Writer*, and that hereafter all that we attempt to say on postals, will be *printed*. We have not yet decided whether to hitch it to the "wind-mill," but it will have to stand some "wear and tear," at all events. It cost \$125.00.

MR. W. W. MARTIN, Catlin, Vermillion Co., Ills., has been purchasing \$1.00 Queens and selling them as tested at *str* dollars each. Much is due friend Nesbit, of Cynthia, Ky., for ferreting out the fraud, as he thereby loses what might have been a profitable customer. It will probably pay the bee-keepers in Mr. Martin's neighborhood, to take a Bee Journal.

ON another column we have stated pretty positively that bees never start Queen cells when they have a Queen, but to-day we found a whole cluster of cells where we had put a Queen yesterday. As we were about to put in another Queen, we observed the former one striding over the half made cells very much as if she had a deep interest in the proceedings. Our opinion is that they had not yet noticed she was a Queen, as she was put in when newly hatched.

FRIEND Marvin, of St. Charles, Ills., hasn't given up bees by any means, and he now reports such an enormous crop that there would hardly have been room for it in the honey column, had it been in time. Should we give the number of tons, everybody would be moving there, as they are to Point Coupee, La., since Parlange reported in the *Bee World*, that he had got up to his 49th barrel 500 lbs. each—and that he had not got through yet. Who makes the next great sensation?

THE cheapest way to send the comb foundations, where less than 5 lbs. is wanted, in general, will be by mail. Will not Mr. Long make some such arrangement to save our friends such expensive express charges? Again, it is quite a task to piece them together to fill our frames; we *must* have them made so that a single sheet will fill a frame. Our plan of fastening them in the frames is to cut a board to fit nicely inside the frame, and then to nail stops on the edge so that it will just go into the frame half way. Lay on your wax sheets and run a hot iron around the edge, and it is fastened exactly as we want it. The bees always bulge the combs in an undesirable way where the joints in the sheets occur.

QUEENS, QUERIES, ETC.

THE Queen from Dadant is dark, but I like her very much; her daughters are very prolific. It is fun to take out the comb she is on, and see her lay eggs as if there was nothing wrong. She is very quiet on the combs, just the kind I wanted. The

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

SUPPLEMENT---SEPT. 1, 1875.

No. IX.

ANOTHER SUPPLEMENT.

DO you ask what for, dear friends? Well, principally because we want to have a "big talk" again, but not all on that account, either, but because we think what we have to say may help you some. You just be quiet a minute, and we will get down to the matter by and by.

Do most of you remember the red wooden balls with rubbers tied to them, that juveniles used to think such rare playthings a few years ago? Well, when they first came around they used to sell for 25c., then for 15, and finally for 10 cents. About this time we discovered that we could get them by the gross for 3½ cents, and proposed that they could be sold for only 5c.; the objection was raised that 1½ cents would not pay the expense of showing them, etc., but we carried our point, and no advertising was needed, for every urchin "spun" home with his ball and the joyful news, something like this:

"Oh mother! mother! just see; and it only cost five cents!"

Sister must have one too, and little brother likewise of course, and the sparkling eyes and screams of delight were almost ample compensation, even if we had not made a cent on the speculation, but the beauty of it was that we sold several gross, almost as fast as we could hand them out.

Now, we felt then very much as we feel now when we get a letter like the following, from one of our readers who had a "desperate," hard time in getting \$10. to send for an extractor that he needed badly. His frame happened to work nicely in the Standard, so we wrote back to him that there was \$1.00 balance remaining in his favor; as it happened, he had been wondering how he might get just one more dollar for an Italian Queen, and when we handed it to a neighbor to send him one, he wrote as follows:

I got the extractor all right, and extracted between one and two hundred lbs. to-day. It works like a charm, better than I expected. It runs faster than I thought, full as fast as Abbott's, of Wakeman; his has no arm in to hold the shaft firm, but the bottom is stronger, with a strainer all over it, so the honey needs no straining as it does with yours, but Abbott's costs almost double what yours does. Your knife is a "clipper," could be no better unless a longer blade would improve it. The charges were not so much as I expected, 75 cts. only, 35 from Medina to Cleveland, and 40 from Cleveland to Kingsville.

If you should have a Queen sent me, have it sent by mail, as the express office is 6½ miles off. The honey harvest is not much just now; has been very good and bees have done well where there were any left after the April freeze; am well pleased with GLEANINGS, shall get back volumes as soon as I can, they must be

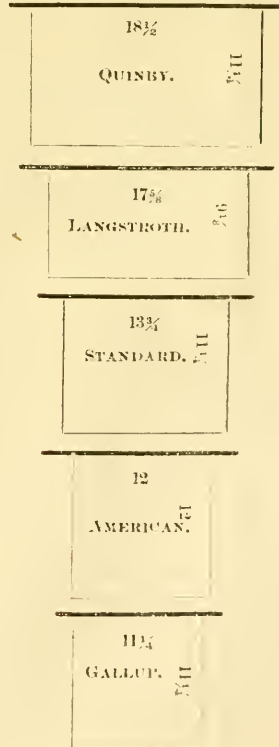
worth five times what they cost.

LEWIS COON.

Monroe Centre, Ashtabula Co., O., July 28th, '77.

We probably shall not be able to sell extractors for five cents, nor for five dollars, but we are going to try to see how well we can do, even if there seems but little possibility of inducing even beginners to commence with one standard frame. As the business enlarges and increases, several new points begin to develop themselves, and one important one is that all machines to work to the best advantage, should be so made that the frame may hang in them just as it hangs in the hive, if we except the L. and Q. frames, and all having a length under the top bar greater than 14 inches. It may be impossible for us to give all the reasons for this now, but we hope you will take our word for it when we say there are very good reasons for standing a frame on end in the extractors when the length is much greater than the depth.

DIAGRAM OF PRINCIPAL FRAMES IN USE.



We present to you again the diagrams of the principal frames in use, that we may better describe the different extractors we have been obliged to make, to accommodate all our friends to the best advantage, and at the least expense.

We have before explained that we have our castings made to fit two differently sized cans, viz., 17 and 20 inches, and we will now further state that we make the cans also, of two different heights. To work nicely, the frame needs about the same amount of room to hang in the extractor, that it has in the hive; and to do this there seems to be no other way than to make every extractor to fit the hive it is intended for. Of course you can use them otherwise, but we are well satisfied that the cumbersome machines now in use are many of them destined to be soon laid aside for the more modern kind. The following table is for the convenience of those ordering machines, and is intended to enable any one to decide for himself exactly what he can use to the best advantage.

Price List of Extractors.

[The figures in the parenthesis, just before the prices, give the exact *inside* width of the revolving frame of the extractor, *in inches*.]

No. 1. For the Gallup frame, or any frame 11½ inches wide and not more than 12½ deep....(12)	\$8.50
No. 2. For the American frame, or any one 12 inches wide and not more than 12½ deep....(12½)	8.75
No. 3. For any frame 12½ inches wide and not more than 12½ deep.....(13)	9.00
No. 4. Standard Extractor, for any frame 13¼ wide and not more than 12½ deep.....(14¼)	9.00

The above are all in shallow cans, 17½ inches high, and are very convenient for placing at such a height as to allow of running the honey directly into the barrel or any other receptacle, and still not be too high for any one to work conveniently. The following numbers can also be used in the same way, unless the operator is short in stature; in that case, a shallow box may be inverted to stand on, but is somewhat inconvenient.

No. 5. This is made expressly for the Langstroth frame, which is to be used standing on end; it will take any frame whose top bar does not exceed 20 inches, and depth 9½ inches....(16)	9.00
No. 6. The same except that it will take a frame of 10½ inches in depth.....(11)	9.50
No. 7. This is made expressly for the Quinby <i>suspended</i> frame, and will take also the other kind when the end bars have a depth not greater than 11½ inches.....(12)	10.00
No. 8. This is for all Quinby frames, and all American frames having a depth greater than 12½ inches, and can be used for all the frames in our diagram, but is much more inconvenient than the smaller ones where they can be used.....(12½)	10.00
No. 9. This machine is like No. 8, except that it takes a frame ½ inch wider, and is suitable for American frames that are 12½ wide and more than 12½ inches deep.....(13)	10.00
No. 10. This is the largest machine that we keep in stock, and will take a frame as wide as the Standard, and as long as the Quinby.....(14½)	10.00

All of the last six—tall cans—have a support at the bottom for the frames to rest upon, and also to hold broken pieces of comb, should it be desired. The four first have nothing of this kind, for it is not needed, and would in reality only make them heavier, and be in the way; we advise purchasers always to take the smaller machines when they will take their frames. For instance, we would much prefer the No. 4, to the No. 10, even if offered at the same price, provided we had nothing but the Standard frame in our Apiary.

Although our machines are now made much lighter and stronger, the gearing very much improved in looks as well as in strength, an improvement added whereby once oiling will last for years, a cover and strainer added, and the prices reduced, yet we still make the proposal that we will, to any one who has purchased one machine, give him 10 per cent off on

all he may sell after that; and this is all we can do in the way of furnishing them at wholesale. This offer refers only to extractors and honey knives.

INSTRUCTIONS FOR USING AN EXTRACTOR.

Many of our new friends have asked for directions for using these machines, but really they are so simple, that it seems that hardly any advice can be required. They are all ready for use when received, and most that is required is to screw them fast to some box or bench just high enough to allow the gate to run the honey into the bung-hole of a barrel. Do not undertake to work unless the bees are gathering honey, or you will be very likely to have trouble. The best time is when they are busy in the fields, and if the yield is good, you will hardly need any smoke. Carefully remove a frame from the hive, and then with a series of sudden jerks shake the bees in front of the hive or on top of the frames, as you may find most convenient. When you have shaken off as many as you can, take a bunch of asparagus tops, and gently brush off every bee in front of the hive. Now with the honey knife carefully cut the cappings from all capped cells; to do this quickly you will slide the knife under the caps in such a way as to have them come off in one entire sheet. In regard to straining the honey we know of no way that answers so well, all things considered, as to hang the little bag sent with the machine, in the bung of the barrel; this keeps it all close and tight from flies and dust, and when you stop work for a little while, it is all safe, without the necessity of covering anything up. Two such bags are really needed, so that one can be kept clean and ready to take the place of the other when it becomes filled with impurities. As the sediment always settles to the bottom of the bag, the sides work well as a strainer for a long time. Cloth strains honey more perfectly than the finest wire cloth can. When the comb is uncapped it is to be placed in the extractor; although you can extract one comb at a time if you choose, it is much better to have two, as they then balance each other, and the friction is less on the bearings, though our machines will stand the strain of the heaviest combs, one at a time if need be. Turn just fast enough, and no faster, to throw out the honey, and there will be no danger of throwing out the brood; you will soon learn this by practice. Combs so full of brood that there is but little room for honey had better be left in the hive; there is little to be gained by working very close, and should the honey season suddenly close, there is danger of the bees starving, as we have known them to do, even in July.

If your hives are kept close to the ground, and no weeds allowed to grow around the entrances, there is very little danger of losing Queens while extracting, yet it is a very good plan to keep them carefully in mind, and if you should not see them, we think it a little safer to shake the combs that contain much brood, so that the bees fall directly into the hive. Losing Queens while extracting, is rather expensive business.

After the honey is taken from one side of the comb, it is of course to be turned and the honey taken from the other side. Where the combs are very heavy and the honey very thick, it may be best to throw it out only partially the

first time, and then reverse, to avoid crushing the comb into the wire cloth by the great centrifugal force resulting from such a weight at a rapid speed.

DIRECTIONS FOR USING THE DOLLAR HIVES.

If the hive is received in a bundle, of course the first thing to do is to nail it up. Use the long nails to go through the whole thickness, and the short ones where the wood is rabbeted away; drive the nails as near each other as you can without having them touch. Nail the corners well. The cover when finished is much like the cover of a trunk. When a single hive is ordered some kind of a broad board is to be provided for a bottom board, but when the hive is used as a two story hive—two hives, one over the other make a two story hive—there is a spare cover, and we use this as a bottom board. To enlarge the entrance we simply push the hive forward so that it projects a little over the bottom board, and if we wish to make the entrance very small, we cut out a little of the inside lower edge of the front end board in the middle. In case you have purchased frames and quilt also, with the hive—none are furnished for \$1.00—the frames are to be spaced by the eye as close as may be convenient, and then the quilt very carefully pressed down in such a manner that not a single bee can by any possibility get above it. This seems quite a task, especially when the frames are only $\frac{1}{4}$ inch lower than the top of the side of the hive, but after the bees have once waxed it in place, as they will in a few days, it is quickly and easily replaced.

THE STANDARD HIVE,

is to be put together and used much in the same way, but as there is a permanent bottom and no upper story, it may be regarded as a simpler hive to manage in all localities where out door wintering is considered safe.

DIRECTIONS FOR USING THE UNIVERSAL FEEDER.

Cut off the bar of wood until it is just long enough to hang in the rabbets of your hive just as the frames do. Put the brood pretty well to the south side of the hive, and the feeder on the north side, if it is at a time of the year when they will be likely to build comb underneath it, in July, Aug. and Sept., for instance. Remove one frame, and after taking some pains to make the quilt turn down closely to the next remaining one, put the feeder down between it and the side of the hive in such a way that no bees can get up under the cover. When you have got it all tight, and so the cover will open and shut nicely, you are all ready for the "feed". Now we have made many experiments proving that there is not the least necessity of making your syrup by any formula, or of adding anything in the world to the sugar, but water, either hot or cold, as may be most convenient. If you only want to feed one or two colonies, put the sugar in your coffee-pot, pour on some water, stir it with a stick, and you are all ready. If you feed them simply sweetened water, or fill the bag with dry sugar and dampen it with water, it is all the same to the bees, and if the weather is warm you'll soon have ample evidence that they are profiting by it.

The only time when we have been inclined to feel that the name of this feeder might be a

misnomer, is in the spring with a small colony of bees. In such a case you must get your feeder up close to the brood, and much the best way to do this is to contract the size of the hive with a division board. If you wish to make more feeders, you must use cloth like the sample we send you or you will have trouble.

Where you have a considerable number of colonies to feed, you had better put your sugar into your extractor, pour on some water and give it a few whirls, and you will have beautiful syrup in a very few minutes, all ready to be drawn off at the gate into your coffee-pot, just as handy as can be.

If robbers are at all inclined to be troublesome, you had better do your feeding between sun-down and dark; with these feeders one person can feed 50 colonies in 10 minutes.

DIRECTIONS FOR USING OUR QUEEN CAGES.

The end apartments are for the feed, and the central one for the bees and Queen. The feed may be pieces of comb honey, or a sponge filled with honey; the comb we rather prefer, for if the boxes be well filled, it will sustain 20 bees and a Queen for a period of two weeks or more. When a Queen is to be introduced, place the whole under the quilt directly over the cluster, and if you wish to run little risk, leave them there 48 hours—of course we mean a Queenless hive—then with a very little smoke drive the bees away and slide the cover entirely off. If they come up to her peaceably, all is well; if they pounce upon her with apparently murderous intentions, drive them away with the smoke, and cage her another day. This cage has been purposely arranged so that you can promptly rescue a Queen before they have time to do her injury. With some colonies of black bees, or very dark hybrids, it seems almost impossible to get them to accept a Queen, especially during the fall of the year, or at any time after the honey season has failed, and the best advice we can give for such cases is to put on a Universal feeder and give them a good feed at the time of introducing the Queen. Almost any colony can be brought to good behavior by persevering in this plan of feeding.

DIRECTIONS FOR USING THE LARVAE WHICH WE SEND BY MAIL FOR QUEEN RAISING.

It may be as well to tell you frankly that a temperature of between 50 and 60 degrees will destroy its vitality, and that if any very cold nights have occurred during time of transit, it will be of very little use for you to waste time with it; also, if it has been more than three days on the route, it is probably all dead.

The first thing to be done with it is to get it where the bees will feed it. If you have a Queenless colony, insert it in the centre of the cluster in one of the combs; if you have none such, move a colony away while the bees are flying, or remove several combs covered with bees from a populous colony, being careful that you take none containing brood, or the old Queen. If the eggs are good, you should get 8 or 10 cells on an average from such a piece as we send. We have quite a number among our readers who have completely Italianized their Apiaries by these 25 cent pieces of brood. If the nights are very cool, we often delay sending until they are warmer. Send us addressed postal if you wish to be advised of shipment.

SUNDRY "FAMILY" MATTERS.

Did any of you ever think what a task it is to get the address of each one of our many readers all right, to get your papers all started in the right channel, all the various initials all just as they should be, etc., etc.? It may be that some editors have a faculty of getting along without making mistakes, but we haven't, yet we doubt if any are much more anxious to avoid mistakes than we are; the worst part of it is, that as we stop every subscription as soon as the time paid for has expired,—we feel sure you all approve of this plan, *cash down*—we are under the necessity of making a new list each year, or rather we are obliged to set the names of those up anew, and run the risk of blunders again, of all who do not renew before their time has expired.

The idea is simply that we are trying to study up some plan to induce you all to renew before your time expires, and thus save us trouble as well as yourselves. It is a task to move a multitude of people, do you not know it? To be sure we may be a little presumptuous in taking it for granted that you are going to take GLEANINGS next year at all, but we think we have good reasons for feeling sure that a great part of you will, at any rate. To be frank we have decided to get up a photograph of the house Apiary and wanted to give this to every one who renewed before his time was out. We are sorry to say we cannot afford to do this. At the low price of 75 cents there is very little margin left for making *extra* presents. Many kind friends have suggested that we raise the price, saying they would willingly pay a dollar or more. GLEANINGS was started with the purpose of making it a medium of friendly interchange of ideas, and we purposely put the price so low that no one might call it a speculation. As we have said elsewhere it is no fun for us to do business unless we can give our patrons pleasant little surprises, now and then, to see how good an article we can furnish, for a little money.

Now the photo of the house Apiary will be of the size usually sold for 50 cents, yet we will mail it to all who may choose to send us 10c. extra, at the time of remitting. It will be sent as an acknowledgement of the receipt of the money, and will probably be ready to mail as soon as this reaches you. The picture will contain a view of our own juveniles, and will interest the children if nothing more, and as we shall try to have it embrace a glimpse of all the recent improvements in bee-culture, implements, etc., we think we can succeed in making it worth 10c. to every one of you, aside from the view of the house Apiary, which at this date seems to promise to be the most successful of our many experiments.

GLEANINGS is getting to be of considerable value as an advertising medium, and we have thought perhaps it might be a good thing to publish some of the flattering testimonials of its value in this respect—how bees have been sold almost as soon as the notice was out—how inquiries have continued to come in long after the goods were gone, etc., etc. The following is just at hand:

Dear Sir:—I send you to-day the 10 lbs. Foundations ordered. Please continue the advertisement. I have

received hundreds of letters saying they saw the advertisement in GLEANINGS.

JOHN LONG, 522 Hudson St., N. Y., Aug. 16th, '75.

At the usual rates our price should be 20c. per line, and we had partly decided to make this our rate for the year 1876, yet for some particular reasons we dislike to do so. As we have said before, we like all our customers to feel that we always give an abundant equivalent for all the money that we receive, again, we have many letters from those who do not seem to think that, should we insert them, we would be doing an injustice to those who pay regularly for their advertising. It seems too bad to ask one who offers bees for *three dollars*, to pay for the insertion of the notice, yet in justice we are obliged to do this, or repress the address, as we do in the following:

I have 18 stands of bees that I will sell; price \$1.00 each on the ground. SAMUEL WILSON.

In advertising, as in all else, we must have some pay for the work that we do, and this, like other things where the profits are small, *must* be cash down, to avoid the tremendous task of keeping accounts with so many little items.

In conclusion we must say that we have found the bee-keepers of our land the most pleasant and accomodating people it has ever been our lot to deal with, and that as soon as they understand that one has no purpose of "coming" some sharp game over them, they are the most liberal and unselfish class of people that our country affords.

DEAR GLEANINGS:—Herewith you have 25c., for which please send me larvae from *Imported Queen*. The *A. B. J.*, *Am. Ag.*, *Natl. Ag.*, and all the other Monthlies I take, came this month by the 30th inst., and when I returned from the train yesterday without GLEANINGS, I felt that if it did not come to-day, I'd have to go to Medina for it, for I could not wait long enough to write and have it come afterward by mail. I rec'd it this A. M. and as usual read it over twice before laying it aside. I don't mean to flatter you, but my wife and I both feel and often say that we would not exchange GLEANINGS for all our other Journals and papers together, so far as they treat of bee-culture.

But despite the excellence of your Journal, I owe you a severe scolding, first for the loss of 8 frames made too short for the hive you sent me in April, and second for the very great annoyance I have had with the extractor. I tried to use the frames, and they were not only 1-16 too short, but the comb guides were not secured. When the extractor was rec'd I tried your frames, and tho' they barely missed the cast arm at the top, yet as they did not strike, I did not think to try my own frames, which, of course, had to be longer than yours, yet they have $\frac{3}{4}$ inch play on the rabbets, the result was that when I went to extract I could not revolve a single frame. I had no pruning shears, nor other implement, except a three-cornered file with which to shorten the frames of 30 hives $\frac{3}{4}$ to 3-16 of an inch. Several hives needed extracting, the bees hung idly outside, while the hills were covered with catnip and rattle-root blossoms; I had taken all the frames from one hive into the extracting house; the flying bees had got a taste or scent of honey and were robbing my nuclei; the thermometer was at 90°. I could not find the file; my wife was scolding me because I had not given you proper dimensions for the extractor (*but I had*), and if you are as quick tempered and impatient as I am, you can imagine how cross and worried I was. I nearly forgot to add that my step-father and his family and a visitor were present by invitation to see the perfection of your extractor. However after "a deal of frettin' and sweatin'" I got the frames short enough, and then the way I slung 2 gallons of beautiful white catnip honey out of that hive, was enough to make my friends (as they each and every one did) exclaim "wonderful! wonderful! beautiful!" "I never saw the like."

BEN. S. COLE, Tiltonville, O., Aug. 10th, '75.

[*Moral.* Be very careful to give full dimensions of your frames, and *we* will be more careful to work to them.]

third day after she arrived, two bee-keepers called to see her; they gave me their orders for seven Queens, so you see there is nothing like having good stock to draw custom. The Queen I sent to California went all right in one of your shipping cages. I enclose E. E. Shattuck's postal. The neighbors all said she would never see the "gold country" alive, they were very much astonished to hear that she went safely.

J. M. C. TAYLOR, Lewiston, Md., Aug. 21st, '75.

Mr. TAYLOR:—I rec'd your Queen—on the road 11 days—all right. Also 2 others, one from Tenn., and one from Pa., both dead. Yours was in just as fine condition as when you put her in the cage.

E. E. SHATTUCK, Los Angeles, Cal., July 19, '75.

I have one swarm, that was in fair condition last spring, but is now weak. Much of the brood dies about the time it should be capped. There is no bad smell about the hive. What is the cause? What shall I do with it? Bees swarmed a little. Have no sealed honey yet. Breeding rapidly. (OCCASIONALLY.)

We have never seen anything such as you mention, but would advise giving them a good feed of sugar syrup. Our own sick colony is still in the same condition; quivering, sick and dying bees are to be seen about the entrance every forenoon. We were much astonished to find them entirely out of stores a few days ago, as they were left with a large surplus when we last extracted, and the others of similar size have now more than sufficient for winter. Thinking diet might have something to do with it, we have been feeding them on sugar, but it makes no difference. The diseased bees often crawl into other hives, but at present none of the rest are affected. Some have advised us to destroy the colony, but it comes very handy when some one vehemently asserts that there is no disease among the bees but want of care. Opening this colony invariably silences them.

I have 5 Queenless hives, with capped Queen cells, but not a drone on my place, nor have my neighbors any drones. What do you think will be the result to my Queens? W. J. ANDREWS, Columbia, Tenn.

We are inclined to think there are drones about that you do not know of, but if there are not, your Queens will probably be drone layers, and worthless. If they are not laying at the age of 25 days, you had better destroy them, and unite the colonies with others. If they commence laying rather after the usual time, watch the brood, and if when capping they use high, convex caps, you may consider them drones in worker cells, and useless.

A few have by mistake, probably sent such out as \$1.00 Queens, but we are desirous to say that all such will cheerfully be made good.

Do bees ever attempt to rear Queens from the brood of a fertile worker? BEN. S. COLE, Tiltonville, O.

Of course they do, and to your sorrow, as you will find if you do not carefully keep all kinds of drone eggs out of their way when they are building Queen cells. A Queen cell that is built over a drone larva is usually destitute of the thimble-like indentations usually seen on good ones, and a cell that is smooth externally should always be regarded with suspicion.

Is the demand for dollar Queens sufficient to warrant an Apianian of reasonable experience, to buy an imported Queen, and run a portion of his Apiary for Queen raising. G. R. HUFFMAN, Elmhurst, Ills.

We think it is; we have had many letters asking if we could furnish lots of from 25 to 100. One man sent us \$40.00 that we were obliged to return.

When the upper side of the top bars for frames is $\frac{3}{4}$ inch or more wide, and the quilt pressed down tight,

soon as put on, there will often be bees fastened between the frames and quilt. If the upper edge of top bars were triangular, two made from a square stick—with corner up, would they be better or worse? How to put quilts and boxes on top of frames, without killing bees, is to me an unsolved problem, unless I do it on a slow motion plan.

They would doubtless work a little better with the quilt, but in time our top bars have little bits of comb projecting upward that prevent killing bees; in fact we do not remember that we ever killed bees in the way you mention. When putting on boxes we would drive the bees down among the combs with a Quinby smoker.

In extracting, the combs often stick tight to the wire cloth. It may be the wire is too fine, what size do you use?

After careful experiments, we have decided that wire cloth for extractors should be just about 5 strands of wire to the inch, *tinued* wire.

If the combs are put in the extractor with the bottom next to the centre, and the top toward the outside, or vice versa, will not the honey come out easier? *i. e.*, it is then thrown out opposite the line of motion, etc.

P. MOYER, Sharpsville, Pa., Aug. 2d, '75.

There is a little difference in favor of the plan you mention, but not enough to be worth observing during regular work.

Let me tell you that I have the best honey gatherers from my imported Queen that have ever been in my Apiary, and the Queens are the most prolific that I ever saw. ELI COBLE, Cornersville, Tenn., July 13, '75.

A. I. ROOT, Sir:—I have two very nice Queens that appear to be fertilized and they do not lay an egg. I have others that are younger, that are laying freely. They are at least one month old. There has been hundreds of drones flying near them ever since they hatched, the bees are satisfied with them and will not start cells from brood given them; so far as I can see they are perfect. Did you ever have Queens act so? Can you tell me the cause or give a remedy? If they don't go to work soon I shall try crushing them and let the bees raise others.

S. H. HOUGH, Rootstown, O., Aug. 2d, '75.

We recollect having three different Queens that would not lay, although they were remarkably large and fine looking. We know of no way but to keep them until about the age we have mentioned, and then destroy them and put in others. This is a dangerous state of affairs, for the bees will make no effort to rear another, so long as she remains in the hive.

When a Queen does not lay at the age she should, it is a very good plan to toss her up in the air before the hive; if she flies easily, all is well, but if she falls, or does not fly well, she had better be killed at once. As it is quite a task to hunt up virgin Queens we seldom look for them, but keep watch of the small larva always kept in the hive; if they start no Queen cells she is certainly present, but when they are started, she is as certainly lost.

NOVICE:—Does a blossom that does not produce fruit, yield honey? Our Morello cherries were white with bloom, yet produced no fruit, and the bees did not seem to work upon them. Hives full of brood—no honey scarcely—bees swarming.

Mrs. L. HARRISON, Peoria, Ills., Aug. 7th, '75.

We believe the so called false blossoms yield full as much honey, if not more, than those that produce fruit, for nature's principal object in secreting the honey seems to be to entice the bees, that they may thus carry the pollen from one blossom to the others. If you observe a pumpkin or squash vine, you may easily see that the false blossoms contain quite as many bees as the fruitful ones.

Honey Column.

Do you not think we practice what we teach? Just 12 days ago we paid \$12.00 for a marble topped stand on which to exhibit our samples of honey for sale. This table with its contents was placed directly fronting the street, in the most conspicuous part of our store; and to make it more quickly catch the eye of passers by, we purchased about 100 lbs. of comb honey at a cost of about 28c; this was cut out of the boxes and put on plates, 35c per lb., or 3 lbs. for \$1.00.

The last plateful of the lot is now on the table, and the amount of liquid honey sold during the time has been largely in excess of the comb honey. The machinery works something like this:—it stands just before the large doors that open out on the street—some innocent, unsuspecting individuals will be passing by, and as they casually happen to glance into the stores, they all at once stop, and finally come in to admire the curious and tempting work of the bees, as everybody does. Now 35c seems an awful big price in our quiet inland town, and they generally pass on, but the temptation is often too great, to give to the dear ones at home such a pleasant and happy surprise, and down goes the dollar, while we explain that we regret that it is so expensive, but that it takes the bees so long to build the comb, etc., and by the time we in a neighborly way propose lending them the plate, we have usually made them fully understand why comb honey is so much more expensive.

Now this is not all; some of the honey will run out on the plate, and one must be obtuse indeed who will not soon take a taste and see that this is no better than the liquid honey that we offer the year round for twenty cents instead of 35, and we have been very much astonished ourselves to find that the honey sealed up in the combs is very often not so thick, as that we have extracted. In fact our candied honey taken out a year ago—when melted—is much superior to the honey that runs out of the comb when cutting it. Of course we shall endeavor to keep this honey table "a going," the year round.

"But have the people in your town never been imposed upon by the city manufactured honey?" some one may ask. To be sure they have not. Do you suppose such trash could be sold in our county? Is it not *your* own fault, fellow bee-keepers, if any such stuff finds a purchaser in your vicinity?

P. S.—The girls have just placed a vase of flowers in the midst of the jars and plates of honey. Perhaps we shall be obliged to call on our readers for comb honey to keep this new institution constantly supplied.

We clip the following from the N. Y. Times:

The manufacture of glucose, or corn syrup, should be very profitable in this country. The foreign article, of which immense quantities have been imported since 1837, is charged twenty per cent duty, besides ocean freight. This advantage to the home manufacture is enhanced by the fact that the raw material in the United States is far cheaper than in Europe. A bushel of corn in Illinois costs from thirty to sixty cents, in New York eighty-five cents, while the European manufacturer of glucose and grape sugar has to pay \$1.25.

Now if glucose is desirable for food, and peo-

ple like it, let them have it by all means; but for the sake of the rising generation, if for nothing else, do not imagine that it will be advisable under any circumstances to label it "honey." If it is good mixed, then by all means mix it, and label it "Glucose and honey, prepared expressly for table use, by A, B, C, & Co.," etc. Has the world yet to learn that there is no such thing as telling the truth too faithfully to be profitable, in business transactions? But about this glucose; we are deeply interested, and if it can be made cheaply, why does not some one make it? May it not be just the best thing in the world to feed the bees to raise brood, get combs built, and perhaps to winter them? Do you know, dear readers, that a great industry is springing up, and that there is abundant work for you and me and all of us in raising bees, getting nice combs built from the foundations, etc., etc.? You can all go to work now, *this minute*.

Among all the reports we get of heavy crops of honey, but very little is said of having any trouble in selling it; much less in fact than in former years, but we get the most doleful letters from *some* honey buyers, of beautiful honey that cannot be given away, and the like. What does it all mean? It means, to us, don't sell good honey for less than 16c by the barrel, and not less than 20c at retail.

MR. A. I. ROOT, Dear Sir:—I think those who have good honey will do well not to be in a hurry to sell, and I would not advise any one to send honey to a commission house. One day last week a commission man of this city came to me saying he had a few barrels of nice honey and did not know what to do with it, and did not know anything about the price, nor whom to sell to, and wanted to know what to do with it. You can see from that that any one could have bought it at his own price, and that is what is killing the honey trade, and making it so much of a drag on our market. You can now go among our commission houses and find any quantity of nice honey at your own price, from 8c to 10c per lb. You ask, "why is this?" The reason is they are trying to sell an article they know nothing about, and besides it gets to leaking, and they do not know what else to do, than to sell it for what they can get. If the producer will keep his honey at home till he can sell it for the cash to a responsible dealer, then, and not till then, will we find sale for our honey at good figures, but as long as it is sent to every "Tom, Dick, and Harry" who will sell or try to sell it, you will find prices low and no sale. I am no longer in the trade, for I have time to attend to only what my own bees make, and that has been but very little this year.

I think that before spring (unless California produces a large surplus, honey will be in demand in our city at good prices, for there is not over one-half as much raised this year as heretofore.

W. G. SMITH, St. Louis, Mo., Aug. 6th, '75.

We really wish that those having honey they cannot sell, would help keep this column up; at present, all we can gather from heaps of letters from *bee-keepers* is the following; there are plenty of letters borrowing trouble about how they shall sell their honey when they do get it.

I had 30 colonies of bees to start with this spring, and some weak at that. I made an extractor after my own fashion, and have slung up to date 224 lbs., and made an increase of 20 stands. Am selling at 20 cts. in 2 lb. jars. Will sell 5 lbs. at 15 cts. Hurrah for your house Apary!

JOHN L. CRABB, Okawa, Iowa, Aug. 12th, '75.

Have just removed 40 lbs. of box honey from our best hive. The scales have shown a gain of 5 lbs. a day for a few days past.

J. BUTLER, Jackson, Mich.

Heads of Grain, FROM DIFFERENT FIELDS.

AN OLD BEE HIVE.

TU. DAY, July 27th, 1875, while making a journey through the country I noticed a large bee hive in a yard, and concluded to stop and see it. I found it thus: eight boxes piled on top of each other, and the hive was three feet high, 20 inches broad and 22 inches from front to rear inside measurement. The owner had lived it 22 years, and every spring took from two to three buckets full of honey out. He told me that the bees always had their main brood cluster in the right hand side, and so he did not take much comb out of that side, and they never had swarmed during the whole period of 22 years. This mammoth colony had robbed several swarms which he bought at different times, and he told me that he thought this swarm was the real cause of his neighbor's bees having dwindled down to nothing, and that he would feel happy if he had it out of the old hive, and in a good frame hive, but he could get no one to do it for him. I told him that I thought I could do it next spring if the colony should outlive the winter of 1875-76. I would be very thankful if you would give me a little advice about it.

D. X. KERN, Shimersville, Pa.

If it were our hive it would be transferred before night; and we do not see that any special directions are needed. Our Standard hive would, we think, give ample room. See page 64.

I started with a few colonies of blacks and Italians in all sorts of hives. I have now discarded them all but the Buckeye with my own improvements, and find it the best hive so far, of any I have ever seen or tried. As regards in-door wintering, I have had very indifferent success. I have wintered in the cellar and lost nearly one-half by dysentery, owing, as I suppose, to long confinement, for I think bees should have a slight nearly every good day in winter or spring. I am now wintering on the summer stands, and lost last winter only 7 out of 60 hives, all the others coming out in good order. I have this summer taken 70 lbs. of box honey from one colony that was divided a year ago the tenth of last May. Others have yielded from 40 to 60 lbs. each, so in my case building a wintering house would be incurring useless and unnecessary expense. As for the Italians, I consider the black bee almost as good when properly treated; the secret of success, owing always more to the management than to the kind. I have black bees in my own Apiary and also some from home, that gather fully as much honey as do the Italians.

The answer I always give to those who are desirous of having their old black bees (kept as a good many do now, and also handled in the old style) Italianized, is this: "If you get Italians and treat them just as you are now treating your *old servants*, you will get no more from them; but first learn the art of bee-keeping and then try Italians." I have also reared Italian Queens for sale, and would have made it a specialty, but owing to a press of other business I was obliged to discontinue it. I think the Italian Queens are much more prolific, and breed earlier in the spring, than the blacks, tho' I do not think their worker bees less apt to sting, for I have had them as cross as Tartars. Nor can I recommend them as working more on red clover, than the blacks, for I have never seen it. As regards dollar Queens, I bought on several occasions, quite late in the season, and they being unfertilized, I ruined the colonies I put them in.

Now for extracting: I am a beginner in *that* branch. My first operation was in June when honey was flush, then my bees were docile, and were easily handled, but since honey is scarce it is almost impossible to open the hives. As our brother bee-keepers have never given much of their experience in extracting, will not some of them give us their *modus operandi*?

SAMUEL MUMMA.

Higspire, Dauphin Co., Pa., Aug. 2d, '75.

Now friend M., to be frank, we should consider your opinion of the Buckeye hive of more weight, had we not observed "rights for sale" on the envelope enclosing the above, especially since the hive mentioned has been almost universally abandoned, at least in the impracticable shape that it was when Mitchell sold rights for it. Your admission that Ital-

ian Queens are more prolific is alone a very strong concession in their favor, and when you admit being unused to the extractor, we are not surprised that you do not give them justice, for it seems to us *they* particularly demand the aid of the extractor; otherwise they may so cram their hives with honey, as to work their own ruin, particularly, when this same red clover is in bloom, during the latter part of this month. We find them on the red clover here invariably, but very seldom see a black bee on it.

It is a very difficult matter indeed to extract after the flow of honey has ceased, and we would advise no one to undertake it, unless the combs be removed from the hives by moonlight, as we advise in another place. Your yield of box honey is certainly good, and we wish more of our readers had equal skill in the same direction.

If any one has been guilty of sending out *unfertilized* Queens as "dollar Queens," it is your duty to give us their names and have them published.

We cannot publish a tenth part of letters in favor of the Italians, but the one peculiarity, mentioned in the following letter, places them far ahead of the blacks.

THE VALUE OF ITALIANS.

The moths have been troubling my black bees very much, and there are but few combs in even my strongest hives, that have not some moths in them. I rec'd an Italian Queen with 4 or 5 three banded workers and placed them on two combs with young bees gnawing out. These combs, though they were taken from the middle of hives over full of black bees, had a few cells in each that were uncapped by moths; next morning I found these young bees on the bottom of the hive and the moths gone. The robbers were very bad at the time, so I kept the hive closed three days, then opened it and sat by to see. I let a robber or two in and kept the rest away; one was driven out soon, and I let in others; in a few minutes one of the Italians came dragging out a dead robber, then stationed herself with a young bee that had lost one wing, and had a large patch of moth web on its back, at the entrance, and these two kept the robbers out for the rest of the day. Since then (5 days) there have been two of the yellow workers and several young bees on guard all the time, keeping all robbers out. These two advantages would be sufficient to induce me to decide to Italianize my whole Apiary, if no other existed.

J. R. ONEY, M. D.

Dixon's Springs, Tenn., July 22d, '75.

Commenced 8 years ago with one swarm, ran up to 40 in time, to lose every one two years ago last winter. Sent to your friend Shaw for one swarm of Italians two years ago last May. I now have 35 by natural swarming. I have worked for box honey, but the Italians don't seem to be so good for that. They are great on the swarm. My wife says, the first thing they do after getting into a new hive, is to start a Queen cell. Wintered in the cellar last winter with good luck. Cellar in dry gravelly soil.

P. S.—Just as I finished the other sheet, I heard the swarming hum again; and while hiving them I heard a remark from a little boy that passed by, as he has several times with his mother this summer, "He's tuk it down." "What?" said the lady. "Why that pole with that 'ere bob on."

You see I had put up a swarmer according to GLEANINGS, mullein stocks, etc., and after 21 swarms came out, circled around it and then settled on the cherry trees, I took it down. It may be a good thing where there are no trees, but who wants to live in this country without a tree?

THAT SMELL.

Let me here remark that last winter one of my swarms got uneasy in the cellar, and I noticed that particular odor that I did before when I lost all my bees by some disease. I took them out doors; it was hardly warm enough for them to come out well without loss, but I thought best to let them fly. Perhaps a third of them never got back. At night when they got quiet I carefully raised one end of the hive and

poured a tea-kettle full of hot water across the bottom which cleaned it thoroughly and killed the smell; I put them back and they came out in the spring all right and were quiet the rest of the winter, which was a long one with us.

ALONZO BORDEN, South Lyon, Mich., Aug. 1st, '75.

From my 42 colonies—for that was the number I had after they got fairly through mixing up in the spring—I have had 69 new ones, all but 4 of which were natural swarms. Several second swarms united, so I have now 105, and have taken about 1000 lbs. of choice honey, and expect to take more. I am trying 4 New Idea hives with 24 Gallup frames each; so far, I am well pleased with them. One of them cast a swarm, but I returned it after extracting and destroying the Queen cells. E. A. SHELDON, Independence, Ia., Aug. 9, '75.

EDITOR GLEANINGS:—As you requested report from the "Organ Hive," I hereby record its death and burial. With the death of the swarm, ends the project for the present, as the Apiary from which it was selected has run down so low. When we have learned to winter bees, however, we will try it again. Meanwhile, the old organ (purchased in the old school days), must do duty still. Perhaps the new one will come by the time Blue Eyes (of the same age as your own) will need it. I wish better success to those who try the same experiment. MRS. S. ROWELL.

FRIEND NOVICE:—Only one of the six swarms I put into the cellar last fall lived through the spring, and that was weak, did not get ready to swarm till the 18th of July. On the 25th of July I raised up the hive and put under them a hive full of empty comb; by the 26th extracted from the 2 hives more than 60 lbs. of nice light honey, (white clover and linden). Yesterday, (Aug. 7th), I extracted from the new swarm more than 50 lbs., and think there is as much more in the other hive. But how am I going to winter them? That is the question. During the last five winters I have lost more than my increase the summer before.

Mr. Thomas, of Brookline, Canada, in the *A. B. J.*, several years ago, said an out-door cellar was a sure thing for wintering bees, but he did not describe it very particularly. Do you know whether he or any one else has such a cellar to winter bees in, and what their success has been? I have a side hill (south slope) on my place, just the best kind of a place to build such a cellar, but I do not want to go to the expense of building till I can hear more about its adaptability for wintering bees, and more particulars about its construction. Would not a report and description of it from Mr. Thomas be of sufficient interest to your readers to justify you in publishing the same?

S. ROWELL, Faribault, Minn., Aug. 8th, '75.

Like the many plans given that were to be sure things, Mr. Thomas failed with all the rest, and even to his own sorrow. We believe cellars under buildings are now considered safer, if anything, than others, simply because they are more apt to be frost-proof. A cheap and efficient plan for an out-door cellar is given on page 133 Vol. 2. With the good report you furnish from one colony, it seems a pity that you should be vanquished simply because you can't winter them. Are you sure you have plenty of bees to cover all the combs while they are sealing up their stores all through the fall months?

Bees gathered just enough to raise plenty of brood, and not store any surplus. They would swarm out and leave a hive full of brood, and very little honey; they went along in this way until the linden bloomed, when they ceased swarming,—this was about the 4th of July—they gathered a great deal from it, and it lasted for two or three weeks.

JOHN BAIRD, Elm Grove, W. Va., Aug. 11th, '75.

A very few have reported linden honey, but in most localities, like our own, it is reported an entire failure this season. We who have been so successful in getting increase of stocks rather than honey, will have to see how cheaply we can supply our less fortunate friends next season, if we winter them.

DEAR NOVICE:—For the benefit of bee-feeders I will tell you how I feed bees. I got a tin pan made (of any shape wanted), one or two inches high, then cover the top with wire cloth, bend the wire cloth over the

edge of the tin, then turn your syrup on the wire cloth and fill up your tin. It is fun to see the bees carry off the syrup. Bees have done well here this season, swarmed 3 or 4 times, and gathered a good supply of clover and basswood honey.

V. MC BRIDE, Chardon, O.

MR. NOVICE:—I have noticed dead brood in my hives, unsealed, with the cells lengthened. This being my first attempt at Apiculture, I do not understand the cause; if you can give me any information, you will oblige me very much.

W. L. SHEPARD, Natchez, Miss., Aug. 6th, '75.

We are strongly inclined to think you mistaken about the brood being dead, and that if you watch carefully, you will find they will all come to life in due time. Sealed Queens and worker bees also, are to all appearance dead until just before they hatch, and these unsealed workers—always found during very hot weather—turn dark just before hatching, and look very much like dead brood. Your mistake is a very common one, but if they really are dead it is something that has never as yet come under our observation.

EDITOR GLEANINGS:—Nearly all our bees in this and adjoining counties died of "spring troubles," so that out of 96 stocks last fall, I had 10 miserable remnants left on the 20th of May. At that time I had received one stock with an imported Queen, from Hamilton, Ills., and 20 stocks from Jefferson, Wis., all fine Italians, with about a dozen of my neighbors' "remnants" on shares; I had enough bees then, I thought, to commence the season with. Can report 1000 lbs. very choice basswood honey, and 150 lbs. mixed fruit blossoms, maple, etc., all extracted, and the sale of fifty Queens ranging in price from \$1. to \$5. each; and an increase to 100 stands in good condition to do duty on the autumn flowers, of which we have an abundant supply in this part of the country. It has been very wet and cool most of the time since first week in June, and has been the most unfavorable season for honey I ever knew in these parts; clover yielding none, and basswood but little, in comparison to what it usually does. 14 K.

Napoleon, Ohio, Aug. 9th, '75.

FRIEND NOVICE:—(On page 165 you ask me, how I would have taken the bees off the apple tree. Really, friend N., the stricture was written for a harmless kind of "drive" at a leader of our ranks, for a little irregularity, and not at all with the idea that I was competent to give you instruction in Apiculture. And we should probably have taken them off very much as you did, *except* that all hands would have been properly protected about the face, before cross hybrids were meddled with, and no thought of a retreat would have been entertained. The live, platform in front, would have been placed conveniently near the tree. A little water would have been gently poured on the cluster, and a proper hive would have been used, in which to shake the bees, and quietly deposit them on the platform. The feather end of a turkey quill would have been used to partially direct their movements, in the proper direction. And as a result, even cross hybrids would probably have been lived with scarcely the infliction of a single sting.

Perseverantia vincit. Respectfully, D. P. LANE, Koshkonong, Wis., Aug. 14th, '75.

Should we have occasion to have a second lot of bees reared from that Queen, we shall doubtless take some precaution, but never having used or needed *any* protection before, how were we to know they would be cross? The foliage of the tree would have made it quite difficult to sprinkle them, and as for "poking" them with a quill, well, it strikes us they were in no mood, on just that particular rainy morning for any such play. The Q. hive in which it was our desire to place them, it so happens, requires about "two men and a boy" to carry it.

I am happy to report a yield of 1700 lbs. of *strictly* linden honey—all gathered by the workers of sixteen Queens. How's that for "grasshopper year?" Blind staples are an *unmistakable* humbug.

E. M. HAYNOR, Kansas City, Mo., Aug. 10th, '75.

We believe our friend refers to wire staples used to keep the frames the proper distance from the hive, and from each other; although *beginners* often insist that something of the kind is needed, we believe they usually come to the same conclusion sooner or later, as our friend above.

The present has been a very poor honey season in Southern California, owing to a very heavy frost in April which extended over the whole state. I doubt if in this county—which probably suffered less than any other,—the production will exceed half a case (say 25 or 30 lbs.) to the stock, though an exceptional Apiary has yielded nearer three cases (say 150 lbs.) to the stock. There are about 15000 stands of bees in the county. Yours respectfully, E. W. MOORE.
San Diego, Cal., Aug. 31, '75.

DEAR NOVICE:—Thus far this has been but a medium season for bees in this section, some call it very poor. I have extracted about 800 lbs. white honey from locust, raspberry, and white clover. Basswood amounted to nothing; buckwheat is just commencing to bloom, and gives promise of a good crop of both honey and grain.

W. D. WRIGHT, Knowersville, N. Y., Aug. 9th, '75.

I have only 50 colonies, all in your Standard hives, with your corners and rabbets; about half Italians and Lybrids, and balance, our native grey bees. The season opened a little late this spring, but it was unusually good, in fact the best we have had for several years. I have made 3 new colonies each, from a majority of my old stocks, and have extracted 50 lbs. of honey from each; and they are all in good condition for the second season. I have also extracted 140 lbs. from all those I did not divide, and expect as much in September and October from all. The few colonies I ran for box honey have given me an average of 40 sectional boxes weighing about 2 lbs. The Italians did not gather any more than the others this season. The only difficulty is that we have no sale for our honey, and have to keep a majority on hand. The reason is that our market is full of adulterated honey from New York and Chicago.

PAUL VIALLOX, Bayou Goula, La., Aug. 1st, 1875.

DEAR NOVICE:—In the August number of *GLEANINGS* I see one of your correspondents raises some doubt as to the possibility of introducing virgin Queens. I think it can be safely done every time if the Queens are less than 12 hours old. My way is as follows: I remove the top of the hive, and drop the young Queen, after being smeared with honey, thro' the hole in the honey board. By this method I have introduced a number of virgin Queens with uniform success this summer.

In my opinion, your lamp nursery is going to revolutionize the present methods of Queen rearing. If it will do what you claim for it, is there any necessity for having nuclei? At any rate I shall try one next season.

We cannot think smearing the Queens with honey at all necessary, but there may be something in having young or old bees, to introduce them to. In the house Apiary we soon had only young bees, for the old ones very quickly went home, and on removing a hive and giving the Queen to the bees remaining on the old stand, we afterwards found her dead. There may be however, some other reason for this, for when we put her with them she crawled all about and among them without being noticed in the least, but as bees in this case will be returning to the old hive for two or even three days, some of them may not have seen her until she was so old as to be noticeable.

If rearing Queens for sale you certainly must have nuclei in which to get them fertilized.

Does a pure Italian Queen have dots on her back as represented in cuts?

We think it accidental, and not important whether she does or not.

Would it be advisable for me to purchase an imported Queen and take the risk of introducing her this fall, or should I wait until next spring.

Use combs of hatching brood as we have advised, and there need be no risk in introducing at all. If you are in the habit of losing many bees in wintering we would advise waiting until spring, otherwise we do not see that it makes any material difference.

Will the black daughter of an Italian Queen that has mated wrong produce a black progeny?

The question is indefinite. If the mother is pure her daughter will be a hybrid, and will produce one, two and three banded bees, but none—so far as we can find—that do not show a trace of one band. If the mother is mis-mated and the daughter also, we shall have bees nearly black—perhaps some of them one or two banded. About a month ago we found a second swarm of black bees, and carried them to our Apiary, where the Queen was shortly fertilized; to-day young bees are hatching out, some having 3 bands, and none less than one or two.

How can surplus combs built from sugar in the fall be kept from moths until wanted the next spring?

Hang them in the hive or anywhere else, so that they are 1½ or 2 inches apart, and we think you will have no trouble. We have never had any trouble with combs out of the hive, unless in very warm weather.

How much sugar syrup is required to winter a colony of bees in a hive of 8 frames, and what is the proportion of water and sugar?

F. I. MACK, Johnstown, Wis., Aug. 6th, 1875.

Depends much on the size of the colony: 8 L. frames well covered with bees would need on an average about 10 lbs. of sugar. If they have to be fed in Aug., and brood rearing kept up all through the fall, say 15 lbs.; if combs are to be built out also, say 20 to 25.

I sent to nine different states for dollar Queens, all came right with the exception of 4; one not here yet, 3 killed by the paper getting torn off and the postmaster playing with them. For a short distance they will stand shaking and blowing. I got them from New York and Maryland, just as fresh as when put up.

E. E. SHATTUCK, Los Angeles, Cal., July 19, '75.

We think we may now consider the matter settled in regard to sending Queens to California; who is going to send the first Queen across the ocean *by mail*?

It is said worker bees live only about 90 days, and yet I read of bees being shut up in a cellar for 4 or 5 months at a time in the winter. Please explain. E. C.

Working bees live only from 40 to 60 days during the working season; if confined to their hives as in winter, they may live 6 months or more. If we are correct, they lose their lives by wearing out their wings, hence, their length of life depends much upon the weather and the yield of honey.

MR. JOHN LONG, Dear Sir:—Your samples of Comb Foundations were received some time ago, but owing to press of business, were not tested as soon as should have been. The bees go right along, and complete the work thus laid out; and I can say that as far as test has been made it works well. The value of your Comb Foundation in this state, would depend greatly on the price at which it could be furnished, the cost of labor introducing it, etc. J. S. HARRISON.

San Diego City, Cal., July 29th, '75.

MR. JOHN LONG, Dear Sir:—I have tested your Comb Foundation and it works to a charm. Please send me 5 lbs.

O. L. BALLARD, Malone, N. Y., Aug. 6th, '75.

Since the middle of June we have had an abundance of white clover, but it has produced no honey. I think the bees are getting something from it since last Sunday. I had my best stock nearly ruined by going to a grocery cellar, had to move it to the country. There are some fine colonies in town without an ounce of

honey in their hives. I don't think there has been five pounds of surplus honey taken within reach of this place. Still hoping for something this fall, I am yours etc. W. O. ATKINSON, Vermont, Ills., July 29, '75.

You should have curtained the cellar as we did the cider mill a year ago, see page 114, Vol. 2. Unless the cellar offered some great attraction, you could have kept them away by out-door feeding. With a small number of stocks, this is a very simple task, but with an Apiary of 90 colonies, some of them so full of bees that they cannot all get into the hive, as ours are now (Aug. 4th), it looks like rather a formidable undertaking; were they in need of food however, we should not hesitate, but as it is, their hives are pretty well filled with clover honey. Too bad, isn't it?

Some one asked the Editor of the *British Bee Journal* if he answered all the inquiries sent. His reply was that he did not, for it would take all the room in the *Journal* to answer those who were too lazy to look over the back numbers by aid of the index, etc. There may be some truth in this, yet we do not feel quite right, to give any honest inquiry no answer at all. Just listen to our next friend, who says he *hates* the back numbers with which he is very much pleased.

How would hives long enough for 20 frames do?

They do "tip top," but are very unhandy to carry about.

What do you mean by a division board, and how is it used?

A board to hang in the hive as the frames do, that it may be contracted in size to "fit" the colony. If two colonies are to be kept in the same hive, this board must be "bee tight," otherwise it may reach only within $\frac{1}{4}$ or $\frac{1}{2}$ in. of the bottom, and is then simply to keep the Queen on a few combs, that she may fill those she has *full of brood* before the board is moved back to allow her another.

How do you find out what the Queen is doing in the hive, when she is laying, etc.?

Lift out the combs and look into the cell and "see."

In your last issue Mr. Corbin speaks of fertile workers: *how is that?* I thought the Queens laid all the eggs.

So they do normally, but suppose a strong colony are deprived of their Queen, and when they have reared another, she is lost also; they have no eggs or brood with which to rear another, and what is to be done? Now experience has shown that whenever this occurs, one or more *ordinary* workers will soon commence to deposit eggs, as the Queen does, except that these eggs are always scattered about in an irregular manner, 3 or 4 in a cell, etc. These eggs in time produce drones, perhaps some smaller than natural ones, and the colony soon perishes unless they are helped. Now the strangest part of it all is, that these workers are treated as Queens, and it is consequently very difficult to get them out and introduce a genuine Queen. Hence the letters referred to.

Are the tin troughs for the frames to rest on, the usual practice? Is there any way to keep the ends of the frames from slipping when you raise the quilt, and are the frames spaced in the hive by the eye, or is there no plan of notching at the ends to keep the frames in their proper places?

In practice it is found to be very unwise to have the frames at fixed distances; we want

them to slide freely along the rabbets, or "tin troughs" as you call them, and during a heavy yield of honey, we frequently space them so that 8 or 9 frames occupy the space of 10. You can dispense with the rabbets if you choose, but after a hive has been in use several seasons, and the frames glued fast in their places, we think you will be glad to adopt the metal bearings.

Can you send me an extractor, knife, etc., next spring, and prepay express or freight charges, and at what price? I think I will send you some subscriptions after awhile.

E. C. Cox, Centerville, Texas, July 11th, '75.

We can prepay *express* charges, but not freight; expense will be between 4 and \$5.00 from here. As extractors are rather bulky freight, the expense is not very much less than by express, and time of transit much longer.

Can you tell me who has empty combs for sale? The people in this part of the country use old box hives; and when they take out the honey they smoke and kill the bees with sulphur; and what I want to do is to save the bees and brood, and put them into movable comb hives, and let them fill empty comb with syrup in Sept. Do you think that I can make it work? If I can, I can get bees.

Wm. J. McDougall, Emporium, Pa., July 29, '75.

Most assuredly you can make it succeed, but you must commence at once, in fact August would be a safer month to commence operations, than this. If you cannot get empty comb, and even if you can, we think you could make it work nicely to use the comb foundations. By far the better way would be to purchase the colonies outright, that they propose brimstoning, providing you can get them for what the honey will be worth, giving them the hives back, after you have transferred them. We have made colonies thus at two different times, and all that is needed, is to get them to rearing brood as soon as possible, and also, be sure they get their sugar syrup well sealed up in their new combs, before cool weather. Late swarms and colonies that evidently cannot winter, can be transferred in September with ease; the only trouble with *heavy* ones, is that you will get the honey to running and thus start robbing. [As we did last month.]

If my memory serves me right, in the editorial columns of GLEANINGS, a year or two since, it was suggested (especially to avoid robbery) that honey be extracted by moonlight. At that time I had never seen an extractor. At the present time I am inclined to the opinion that the Editor never had seen one—by moonlight. Very truly, G. E. CORBIN.

St. Johns, Mich., Aug. 3d, '75.

P. S.—Am well pleased with the extractor I bought of you. Have taken with it, from eight colonies, about 1000 pounds of choice "white honey." I sold one colony, three went to the woods, and I have 22 now; all from the original eight colonies. G. C.

Now friend C., if you have not *tried* extracting by moonlight, your opinion is very rash, it is not an unkind one. We did extract by moonlight (only from the upper stories however), and should assuredly do it again under like circumstances. If you use plenty of smoke to drive the bees below, and then stand well at one side when you shake the bees in front of the entrance, to avoid getting them on your clothing, you will have no trouble at all. In the extracting room of course a lamp must be used, and the only annoyance there, was caused by bees from outside occasionally flying in.

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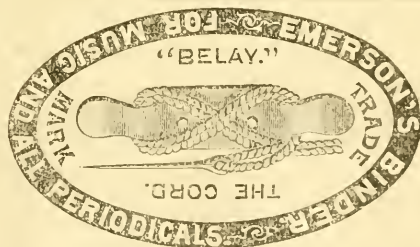
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Or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO.

BY A. I. ROOT.

Vol. III

October, 1875.

No. 10

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

*[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been
Published in America.]*

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JOHN LONG, 522 Hudson Street, N. Y. City.

DEAR SIR: *Amboy, Ills., Sept. 6th, '75.*
The Foundation Combs you sent me were rec'd all right. I at once experimented with them. Extracted honey from one in three days after placing it in the hives. They are just the thing so long needed and can be used for almost every purpose and way about the hive.
Signed, Yours truly, R. H. MELLE.

DEAR SIR: *Brookfield, N. H., Sept. 11th, '75.*
The Combs are perfectly satisfactory. This lot I put into 19 Langstroth frames and put in upper and lower stories both, between full combs in various hives. Some combs were wet with sweetened water, some were not, it made no difference. Some of them are full of honey cells lengthened out and partly sealed.
Signed, Yours resp'y, E. C. NEWELL.

DEAR SIR: *St. Johnsville, May 18th, '75.*
In a hive that was about ready to need combs I put a large frame containing half a dozen small ones, small ones 5x6 square. In half of them I put pieces of Foundations, in the other half I put a guide of wax across the top one-fourth inch in width. Bees have commenced on both alike; cells in Foundations half an inch deep; some honey but no eggs yet. A great many will want a small quantity at first. If I could see you I think I could make some valuable suggestions. Yours, M. QUINBY.

DEAR SIR: *Coleman, Mass., Aug. 16th, '75.*
Mr. Langstroth sent me some days ago part of sample of your Foundations which I placed in a colony and fed them, (as the bees are getting no honey) I would say that we were well pleased with the way the bees lengthened out the cells.
Wm. W. CARY, Sr.

BEES FOR SALE.

40 COLONIES Bees for sale. Hives are 8 frame L. hives and 8 frame metal corner Standard hives, both kinds well painted. Hybrids \$10.00. Three banded Italians \$11.00. Plenty stores for winter. The same in well made Quinby hives, box room for 50 to 100 lbs., 8 frames size of Standard, \$1.50 extra.

H. PALMER, Bart, Oceana Co., Mich.

[We know Mr. P. to be responsible and trustworthy.—ED.]

20 COLONIES ITALIAN BEES FOR \$8. PER COLONY.

Strong in bees, and honey to last till spring, with a "dollar" Queen raised from imported mothers in each hive. Straight combs—frames 10x17 inches. Delivered at express office in good order on rec't of price.
9-11d H. NESTLE, Cynthia, Ky.

BLACK BEES FOR SALE.

120 COLONIES, 40 in Langstroth, and 80 in box hives. Price \$4. and \$5. Purchasers must attend to packing and removal. I am going South.
G. H. BYRUS, Pratt's Hollow, Madison Co., N. Y.

DEAR SIR: *Greenfield, Mass., Sept. 13th, '75.*
Those specimens of Comb Foundations were put as I informed you they would be, into the hands of others for experiment, as I have no bees. Mr. Cary who is an expert showed me combs very beautifully finished from a Foundation.
Yours very truly, L. L. LANGSTROTH.

DEAR SIR: *Christiansburg, Va.*
I am much pleased with the get up of those Foundations, and know from experience that they will answer a good purpose.
Resp'y, J. K. GARDNER.

DEAR SIR:—My experience with your Foundations this year is but a repetition of last years'. I can only say with Mrs. Tupper, "they are as perfect as can be." I have noted the objections of Mr. Quinby, and a proof positive of his error send you a complete comb, filled and sealed.
Your friend, AARON PENNINGTON.

DEAR SIR: *Monroe, N. Y., Sept. 11th, '75.*
Enclosed you will find P. O. order for \$5., in return please send me by express five pounds of your artificial Comb Foundations. The only objection I have seen made to these Foundations is that the centers will be "thick and tough;" this to me is a recommendation, and I think will enable me to ship honey in the comb with more safety, the combs being less brittle.
Respectfully, THOMAS SHARRON.

DEAR SIR: *Borodino, N. Y., Sept. 13th, '75.*
Your card is at hand. Would say that owing to the delay caused by the money not leaving this office I did not receive the Foundations until our honey harvest was all over. I filled six boxes with them and in seven days had them filled and capped over.
G. M. DOOLITTLE.

SEEDS AND BULBS.

ILLUSTRATED

SPRING AND FALL CATALOGUES
are published and sent with

The American Garden;

Quarterly Journal of Garden Art.

Only Ten Cents a year! Send it to your friends!

BEACH, SON & CO.; Seedsmen;

7 Barclay Street, New York City.

Public Sale of Bees.

I shall offer for sale at auction—

20 STANDS OF ITALIAN AND BLACK BEES, half in frame, and half in box hives, at my residence in PAGEVILLE, MEIGS CO., OHIO, on the ATHENS and POMEROY STAGE ROUTE, on Saturday Oct. 16, '75.
1tp S. A. DYKE.

DON'T FORGET IT.

See advertisement headed as above in this paper.

CLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

OCTOBER 1, 1875.

No. X.

[For Cleanings.]

HONEY AND ITS ADULTERATIONS.

BY A CITY BEE-KEEPER.

THE solid part of honey, examined under the microscope, is sure to consist of myriads of regularly formed crystals; these crystals are for the most part exceedingly thin and brittle, so that many of them are broken and imperfect; but when entire, they consist of six-sided prisms. They appear to be identical in form with those of cane sugar. Intermingled with the crystals may also be seen pollen granules of different forms, sizes and structure; these are in such perfect condition that in many cases they may be referred to the plants from which the honey was procured. This is a very interesting and beautiful fact in relation to honey. The bees in collecting the honey from the flowers, also carry away with them some of the pollen; now this pollen consists of complex utricles or cells, differing in size, shape and organization, in different plants, and in different orders of plants, so that the observer acquainted with the character of the pollen of flowering plants, will be enabled in many cases to determine whether any particular honey submitted to his examination was collected from flowers of foreign or native growth, whether from field, garden or mountain.

I have made some highly interesting observations in connection with honey: one showing in a very striking manner the amazing industry manifested by the bee in the collection of honey. In examining the blossoms of our meadows, some years since, I was surprised to observe that there was scarcely one that had arrived at maturity that did not exhibit, usually on the upper surface of the corolla, one or more dark spots caused by perforations. The conjecture at once occurred to me, that these perforations were made by the bees in their search for honey, and in order to facilitate its abstraction from the tubular shaped flowers. It was not long before the correctness of this conjecture was ascertained. The bees, on alighting on the flowers, almost constantly inserted their probosces through the apertures already made, or they pierced fresh ones. Now of the countless myriads of blossoms in the field, there was scarcely one mature one observed by me which had not been perforated.

A very good way of obtaining the pollen of honey for microscopic examination is to dissolve a teaspoonful or so of the honey in water contained in a conical glass, and to examine a little of the sediment which subsides in the course of a few minutes, and which in some honeys is very considerable. The water causes the granules to change in form in some cases, and so the better plan is to view the pollen as contained in the fluid part of the honey. Another useful plan is to collect and examine the honey of flowers from which the bees are supposed to have gathered their honey, and to search in this for similar pollen granules.

The more usual adulterations of honey are various forms of starch and cane sugars. Other adulterations used for "candied" honey are chalk, plaster of Paris and pipe clay. The starch is added not only for the sake of weight and bulk, but also to improve the color of very dark honey, and to correct a sharp and acidulous taste which old honey is apt to acquire.

Of the adulterations practiced upon honey, some are very easy of detection, and others difficult, if not impossible. The general method of proceeding in the examination of honey with a view to discover whether it is adulterated or not, is as follows:—

A little of the honey is to be examined under the microscope, when if it contains unboiled starch, the granules will be visible, and may be identified by the characters which they present. If none are to be seen, a small quantity of tincture of iodine is to be added,

which will show whether the starch is present in any form. The starch, as well as any insoluble and inorganic material which may be present, may also be discovered by dissolving a portion of the honey in warm water, and then a deposit will occur after a time. This deposit should be examined, in the first instance, with the microscope, and if it is not found to be of an organic nature, it most probably consists of chalk. For the quantitative determination of inorganic matters in honey, nothing more is requisite in ordinary cases than to collect, dry and weigh the residues deposited from the solution of a given quantity of honey in water, or to take the weight of the ash.

The adulterations of honey, the discovery of which is more difficult, are those with the cane and grape sugars. There are three ways in which the presence of cane sugar in honey may be determined, two of them being supplied by the microscope.

The first is by the size and especially by the thickness of the crystals of sugar; their shape is essentially the same as that of honey. The crystals of cane sugar, as found in honey, differ from those of that substance in being much larger, thicker and less regular in shape; the angles being acted upon by the fluid part of the honey, and in part melted down.

The second is, supposing brown sugar to have been used, by the presence of the sugar *acari*, discernable either on the surface of a solution of honey in water, or in the residue deposited from it.

The third method is chemical. Grape sugar is separated from cane sugar by means of Fehling's solution; the sugar which remains is of course cane sugar; it may be procured, by means of alcohol, from the residue left on evaporation. This method must be resorted to in those cases in which the cane sugar has been added in the state of syrup, when in consequence the crystals are thus destroyed.

The adulteration of honey, which so far as we are aware it is scarcely possible to detect in many cases, is that by grape sugar or glucose, since these possess the same chemical properties as the sugar of honey. As glucose is usually made by boiling with sulphuric acid, and as the excess of this is sometimes neutralized with chalk, the presence of considerable quantities of sulphate of lime affords strong evidence of adulteration with sugar of starch.

We confess the idea is new to us in regard to the honey containing pollen cells, and a rather hasty experiment has not enabled us to discover them. We should be much pleased to hear from others in regard to the matter. If the sediment were pollen granules, we should rather expect it to float. However, "City Bee-keeper" may know much better than we, and we tender him thanks for his valuable communication. We have been for several years much interested in trying to find where the bees were foraging, and in many cases have been quite successful. When working on the touch-me-not they show the queer white spot we have mentioned, when on pumpkins, melons, etc., they are covered with a yellow powder; when on the boneset and eupatorium family, this powder is white; when going to cider mills we can usually detect it by their dirty noses and daubed appearance generally. We remember one day during a drouth, seeing a colony whose bees came in heavily laden with something, and yet with an unmistakable air of soberly

"doing their duty,"—far different from their notions when at the cider mills, or robbing,—that for a long time baffled us; and it was not until we discovered one "son of toil" with muddy feet, that it dawned on us that they were only carrying water. A visit to the creek showed them loading up from the pebbles, and the one we saw had probably slipped off.

THE OTHER SIDE OF BEE CULTURE.

THE following, at least in substance, was sent us some time ago, and refused on the ground that—although containing some truth,—it was too great an exaggeration:

EDITOR WESTERN RURAL:—Thinking that the good of all concerned demands that both sides of all subjects should be shown up, and believing myself to be among the most successful honey producers in this country, I think it would not be out of place for me to say a few words through your columns, should you have room for light matter.

The bee journals lead their readers to believe that apiculture is about the most profitable business on earth, while statistics show that more burks have foundered on the rocks of bee-keeping than almost any other business known. If we throw aside the worthless "modern improvements" (so called), we see little or nothing more to warrant success, than we had twenty years ago. The honey-emptying machine is the source of much thin, sour honey, besides being the instrument which has made the system of manufacturing honey possible. Poor extracted honey has injured the reputation of comb honey, and now nearly every city and town in the United States is drugged with honey. If any one is inclined to doubt this assertion, you can satisfy yourself by talking with honey dealers in your own city.

While I have worked very hard at honey producing and have been favored by fortune as it were, (as my annual reports show) what have I made for all my pains? I have now \$2,000 invested in the most risky stock I know of, and if my year's income should equal that of my neighbor who works in the capacity of clerk, with nothing invested, my report would appear on the first page of every bee journal in the land.

The outlook for the honey producer is darker to-day than for years past. Put your products where you will, and you meet a competition that drags the market. Take from the market manufactured honey, and all honey that cost the producer double what it is selling for, and there would still remain a surplus. We must not forget that bee-keeping as a business, was run into and out of before we were born.

You will notice that nearly all of our leaders in this "fascinating pursuit," no sooner get the business well learned than they change their tactics and engage in furnishing "apiarian supplies" (send stamp for circular); go into the water-cure business, or some other less "fascinating" business. The cost of honey is ever falsely estimated, until the producer makes the business a specialty, devoting his whole time and attention to it, when all at once he finds out that every pound of honey he ever raised cost all or more than he got for it. The specialist can always produce goods cheaper than any other manufacturer or producer can.

JAMES HEDDON.

Cass Co., Mich.

Very well, friend H, we will all sell out and apply to our next store for a situation as clerk. There is room for us all, and they *always* get good pay, wear nice clothes, and don't have much to do. Besides it don't make much difference whether they have earned a reputation for faithfulness and honesty or not. Mr. Palmer of Hart, Mich., has been a clerk, and yet the foolish man has gone out into the woods, persists in keeping bees, and insists that he can raise money in this manner even more quickly. Aside from the profits of his own Apiary, this season, he has been so rash as to go into a project like the following: A banker in Hart who has observed the way in which he has handled bees for a few seasons past, gave him \$500.00 last May, with orders to go and purchase 40

colonies of Adam Grimm. This he did, and located them $2\frac{1}{2}$ miles from his own Apiary. Mr. P. was to take all charge of them, for which he was to have half the net proceeds of sale of honey and bees, and to divide the stock equally at the end of 3 years. Now here is the funny part: the company bees have in just 4 months produced bees and honey to the value of over \$500.00, and yet the original stock is left in fine trim for winter, worth at least all they cost, and yet Mr. P. has visited them no oftener than once in one or two weeks.

MORAL. Adam Grimm always has bees to sell, the swamps and forests of Michigan always yield honey, comb honey in such section frames always sells at sight, and the "unlucky" ones can sell out in the fall, and buy more of Grimm in the spring.

[For Gleanings.]

BOOLITTLE'S REPORT.

DEAR GLEANINGS:—Although we have been silent for some time, we are not out of the bee business as perhaps you have inferred from the discouraged tone of our last writing. By referring to pages 76 and 95 present volume, it will be seen we were only 46 very weak colonies on the 20th of May, and had given up all hopes of any profit from our bees this year. From June 17th to the 22nd we had to keep close watch of our bees every day, as they were in really a starving condition. In the morning there was scarcely a drop of honey to be seen, but at night there would be a little sparkling in the cells.

Locust yielded very little. The trees had a merry hum of bees in them yet the hives showed that they did not get more than they consumed. June 23rd clover began to yield sparingly and continued to do so until the 27th, when it became cold and wet and honey gathering ceased until July 2nd. Our bees commenced to swarm about this time and obtained honey enough to keep them swarming pretty lively until up to the 10th. At that time we concluded to swarm the remaining 15 that had not swarmed, ourselves, as we wished to get back our old number if we did not get any honey.

Bees got but little more than a living from this time to the 16th when basswood and teasel opened. After cutting out all drone comb and getting all combs straightened generally, we found but combs enough for 70 hives, so we confined our new swarms to five frames and by the 20th they had them filled with nice straight worker comb. We spread them apart at that time and put in each alternate space an empty comb, putting the boxes on. Basswood did not seem to yield much honey until the 25th, yet the strongest swarms had commenced in boxes from what they got from teasel.

On the 25th basswood was full of honey and such a roar from bees we never heard. The air was full of them all day and at night nearly every swarm was seeing which could make their combs grow fastest. The 26th and 27th were nearly as good days and basswood was gone. Teasel lasted until Aug. 10th and yielded pretty fairly when bees could work on it, but the first five days of Aug. were so cold and rainy they did nothing. Buckwheat

opered on the 14th and the bees stored honey from it for five days, when it ceased to secrete honey and our honey harvest was over for 1875. We have at date 108 colonies (but shall go into winter with only 100) and have taken 484 lbs. box honey and 30 lbs. extracted, or a little over 106 lbs. to each of our 46 weak colonies in the spring. We should give, in regard to getting box honey, same directions we gave on page 135, Vol. 2, and on pages 20 and 68 present Vol.

We have reduced our Standard Gallup hives all to nine frames yet we think we have honey enough in them for winter, i. e. 25 lbs. each. We had about 1300 lbs. of buckwheat, and the rest was white. We have sold our white honey here at 25 cts. per lb., and dark at 15½. Perhaps we could have done better by holding it, but as we were all torn up building, we had no place to store it for any length of time. We are satisfied more than ever that what we said in regard to profit in bee-keeping on page 135, Vol. 2, was not over estimated.

G. M. DOOLITTLE.
Borodino, N. Y., Sept. 13th, '75.

NOTES BY THE WAY.

BY A. I. ROOT.

SEPT. 14th.—On the cars. E. C. Blakeslee informs us that if the comb foundations are attached to the frames only by the top, the waves or bulges such as we have mentioned when the frame is filled, will be entirely obviated. Hives must be level, of course.

Street car.—Lady has basket,—bottle in it,—asked to look at it;—2 lb. jar honey,—labeled "Nunn Bros. & Co., Oberlin, O."—cost 42c. retail,—very thick and very white.

Northern Ohio Fair.—Half a dozen patent hives, all by one man who takes no Bee Journals, and who evidently tries to use as much lumber and complication as possible, in their construction. Some beautiful honey in the Isham boxes, but no extracted.

Dr. Salisbury's bees,—see page 134, Vol. 2,—are suffering some for want of care, but are now getting honey of a peculiar odor, so strong as to make the air about the hive rather unpleasant. It has the appearance and taste of golden rod, but the raw honey smells almost sour.

1:30 P. M. Jackson, Mich.—Two hours to wait for train—can't sit still—one-half hour hunting for J. Butler's residence—went to two groceries and found only Perrine's honey at about 50c per lb.—at third found golden rod honey both box and extracted—30 and 20c—walked 3 miles—dust and sun—warm welcome—commenced dinner—saw hives through the open door—went out—beautiful autumn honey in boxes. Mr. B. gets all his surplus now from autumn flowers, yet got none ten years ago.

Mr. B. has the turf cut away, and the hives nicely sawdusted in front.

Suspended hive has shown 9 lbs. per day. Promises to tell us how he makes Italians make comb honey. Was kindly taken to the train at a 2:40 pace and then found it a half hour behind time.

Michigan! Michigan! What seas of many hued blossoms, float before the open window of our car. We never, never before saw so much beauty.

3:15 P. M.—Why does not some bee-keeper utilize the acres of swamp land that are now a yellow sea of flowers near Charlotte, Mich.?

17th—Pentwater.—Walked 3 or 4 miles out into the country to see Mr. Stanhope. Found the family all away, but had the pleasure of seeing a multitude of hives scattered on a

southern hillside amid a beautiful lot of fine thrifty fruit trees. From the appearance of many of the new hives, hastily scattered about, we should infer that he too had had abundant swarming. Mr. S. is situated in a clearing in the midst of the wood, yet the comfort and plenty that surround him, aside from the hives, would make almost any one wish to be similarly situated. A bright looking bee stood near by us, and the clean rows of cabbages etc., and the dark light soil made us long to get hold of it and help. After our tramp, we found at tea, some beautiful bass wood honey in section frames, that came from H. Palmer's Apiary; these sections were extremely neat, and the perfectly sealed honey, the clean and tidy appearance of the whole were a surprise even to us.

18th—Visited Mr. Palmer yesterday, and was delighted to find that he is making the wild flowers pay in real earnest.

Considerably over 100 neat tasty hives were arranged hexagonally about his bee house, and the heaps of neat sections full of the most beautiful comb honey, have we fear almost turned our head—i. e. toward comb honey.

In the first place Mr. P. is a rare mechanic and in this region of cheap lumber, his neat foot-power buzz saw—far ahead of our own, only he hasn't any wind-mill—is made to make Simplicity, Standard, Quinby, and in fact almost all kinds of hives to a degree of perfection in workmanship, that is very far ahead of anything we have ever done. Mr. P. has this season been using about 75 Quinby hives, made with a frame the size of the Standard, and he decides that for comb honey, and for himself to manage, he would use them in place of any other.

It is to be taken into account that he has only used them one summer, and that with his workmanship they certainly are beautiful. The sample hive Mr. Quinby sent us is not to be compared with his in workmanship. He reasons thus; the bits of comb built on the top and around the combs of suspended frame hives, (that have to be constantly scraped off) in time amount to as much wax as we lose in selling comb honey, and his light, neatly fitting closed end frames entirely prevent all this. This with the other advantages of the Q. frame already mentioned, is certainly quite an item.

The Harbison section frames illustrated on page 8 current Vol., are just about like those mentioned, except that he uses very thin lumber, and they are sold with the honey, not to be returned. We like this feature because the consumer gets the clean pine frame every time, and we must say again, that nothing we have ever seen, in the way of honey, can compare with these pure clean square cakes of perfectly sealed honey, they are retailed frame and all, for 35 cents.

The fruit, vegetables, arrangement of the barns, etc., about the residence so favorably impressed us that we finally ejaculated, "It must be friend P. that you take the *American Agriculturist*." "To be sure I do," said he, and then we had a fresh topic.

While there we saw him offer a colony of bees for \$12.50, or \$14.00, if to be delivered in good condition in the spring; making the risk of wintering \$1.50.

OUR OWN APIARY.

SEPT. 1st. As sure as you live our bees **S** too, are getting honey again. For several days they have been unusually busy, and to-day the scales actually show $\frac{1}{2}$ lb. clear gain. Now we have been feeding about a dozen stocks for the past ten days,—we do not wish now to feed in the open air, because quite a number have sufficient for winter,—and we had quite a curiosity to see whether those fed last evening would go out to the fields with the same ambition as those not fed; there is no doubt about it, they do not, but before coming to a hasty decision, perhaps we had better inquire if the feeding has really made them lazy. How did a dozen colonies come to be on the verge of starvation when others had abundance for winter? We are very much inclined to think that they had so little just because they were poor workers, and that they do not go out now for the same reason, and *not* because we have been feeding them. One of these indolent ones is a colony about three-fourths black bees, and our best working stocks are mostly of the imported strain of blood. Before dropping the subject we wish to say that feeding *can* be made to keep a good colony at home during a heavy yield of honey, and to avoid this we would feed only at night and in such small quantities that it may be all out of the way before morning.

A. coffee sugar costs us by the barrel, 10 $\frac{1}{2}$ cts., and yellow C., 8 $\frac{5}{8}$; we gave two colonies of about equal strength and both having young Queens, just 5 lbs. of sugar, one the former and the other the latter kind, with a view of testing the comb building qualities of each. Although the yellow sugar was taken up with less avidity, it certainly produced the most comb,—see page 6,—and, so far as we can see, seems to give best results in brood rearing.

The syrup from this yellow sugar appears in the combs like dark honey. It may do as well for wintering, but we doubt it so much that we would advise experimenting on a small scale at first. For building up colonies in warm weather we think it probably even better.

Perhaps the foreign matter may to some extent supply the place of pollen.

Sept. 2nd.—We mentioned having 13 Queens hatch in one day; well, a Sabbath school picnic and several other things so intervened, that we were delayed in introducing several of them until they were over 24 hours old, and more than half of these were killed at once. As soon as let out of their cages they started on a run, and of course the bees put after them full chase, as such suspicious conduct seemed to warrant something wrong. If the young Queen in her fright emitted her peep of alarm, we felt that it was just as well to set the register at “missing”, for we were sure on our next visit, to find Queen cells started.

The suspended hive shows $\frac{1}{4}$ lb. to-day, and comb building has commenced even in colonies that have had no feed. Those colonies are doing best, that show from the white patches on their backs that they are working on the wild touch-me-not,—see page 111, Vol. 2,—and a trip into the forests to-day shows that an unusual amount of honey is contained in the hollow

spur of the flower. On our visit of a year ago, we found the bees going down into the flower without a thought, apparently, of doing any other way, but now, nearly every bee first examines this spur carefully, and strange to tell, often finds a small orifice cut through the side, *perhaps* by the humble bees, although we could see no bees of any kind in the act of making them. Well, the honey is drawn from the spur much more expeditiously than by the old way of pushing into the flower and then kicking and scrabbling to get out backwards. How is it, do bees too improve on former methods of doing things, or is it only because this season differs from the last? Each spur seems to be quite full of honey, and a dozen blossoms it seems, should furnish a good load. We can readily imagine that they might be very glad to escape rattling their fur the “wrong way” so many times in the day, but what will Dame Nature do now if the bees have really invented a short cut for rifling the flowers of their honied treasures without even so much as touching the pollen at all? If it has taken ages to complete the curious and beautiful structure of the touch-me-not, so specially adapted to the habits of our native bees, yet quite inadequate to baffle the extra strength and energy of our new, imported, Italian friends in their zeal for rapid accumulation of sweets, what will the plant proceed to do next?

Get your hats or bonnets, and come with us to the woods one of these fine autumn mornings, and if you have never before felt like bowing in mute reverence and thankfulness before the great Author of this mighty universe, study the insects and plants, and see what broad, open pages are spread out before all who care to use the facilities a kind Father has given us.

Sept. 13th.—In looking over the hives as we have just been doing, to see how many lacked room for the autumn wild flower honey that is now accumulating at about the rate of 1 $\frac{1}{2}$ lbs. per day, we found a quilt that was so badly eaten through that we decided to discard it. By the way, one piece of cloth will prove to be perfectly bee-proof in this respect, while another will be all eaten through,—and the way they string the batting out at the front of the hive is amusing,—yet both may be our favorite Indian Head brand. We have never found any fabric that will stand under all circumstances, except the duck that we use for feeders, and we have tried red flannel, satin, and various kinds of woolen goods in the house Apiary, as a covering for the frames. For a while they would do very well, but when the room became quite warm, as we want it for comb building, for instance, they would be sure to cut little holes through; to be sure they go back down into these holes when it gets cool again, but we prefer that they keep down on the combs. It seems to encourage them in the habit of loafing that we have before spoken of. Well, we threw the spoiled quilt across the trellis, and gave them a new one, and by the way, if we ever lay a thing down thinking we will take care of it at some future time, we are sure to forget it, and so it proved in this case; it was not noticed again until afternoon, and we were astonished to find it covered with bees busy loading the propolis as they do pollen. Now we wish to digress here enough to say that our

Bees have some of them been busy on the red clover for some days past, and we have been quite anxious to see about how much of the honey they were getting was from this same red clover. By careful watching we discovered that these bees always collected a dark green pollen while they worked on the clover, and then we went to the hives and found the same bees going in with the dark, unsightly looking pollen, and we decided to tell you all that when you saw this pollen, your bees were certainly at work on red clover. Now when we found that this propolis from the quilt was precisely in appearance like the clover pollen, we concluded to "go slow" in drawing conclusions.

To-day a visitor, on looking into the auger hole entrances, remarked that the bees were closing them up, and sure enough, they had built walls or sheets of propolis so perfect that one entrance was reduced to the size of ones' little finger, and the funny part is that these walls are all at the inner end of the tubes, close to the combs. Are we sure that they do not know what is best for them, and is it not right for them to coat the whole inside of their hives with this propolis, at the approach of cold weather? We confess that having seen so many colonies winter nicely thus prepared, —out of doors,—has given us quite a strong notion of letting them fix their hives in the house Apiary just as they want them. See page 134, Vol. 2.

Sept. 27th.—Home once more, and to confess the truth, our own Apiary looks about as disorderly as any we have seen. The weeds have grown much in our absence, but the empty boxes, sticks, rubbish, etc., that are scattered about are certainly as we left them. Why is it that such things always accumulate in the fall months? It seems to be an easy matter to keep things neat in the spring and summer, but when frosty weather comes, things will get to looking loose and disorderly, and when the bees are buzzing about, trying to rob each other, etc., somehow the whole aspect seems dispiriting, and then we are very much inclined to want to get away and forget all about them in the discharge of some pleasanter duties. Now this is all wrong; very likely our Apiary needs more attention *now*, than during any other month in the year, and we are going about it at once to put everything in as nice order as we know how, and then when we are feeding, uniting weak colonies, examining stores, etc., we can feel that such duties are a pleasure, and not mere drudgery, and as a consequence they will stand a chance of being *well done*. Who among us all will have the neatest and tidiest looking Apiary during the month of Oct.? You do not *deserve* to have your bees winter safely, if you do not see that all such work is faithfully attended to just as soon as this number reaches you.

WHAT A LADY CAN DO.

SELL at 20 cts. at home, but have about 3 barrels which I would ship. Can you advise me? It's all heavy, good quality honey, one barrel mixed with buckwheat which gives it a reddish cast and rather dark, and 2 barrels rich yellow honey. I am not accustomed to assorting and classifying the honey, so can't tell just what it is made of. A little of every thing I guess, as we have almost all kinds of blossoms in this section, and bees take their choice. I have

taken 2436 lbs. and have 10 good stocks from 10 last spring.

Have you rubber gloves, and price? I believe my bees are related to the Egyptians, for they are so cross.

Mrs. M. A. ELLIS, Osceola, Mich.
Sept. 16th, 1875. Hillsdale Co., Mich.

We can give you no other advice in selling honey than, to develop your home markets as we have advised in back numbers. If you have a large crop go personally and see the grocers or dealers in honey for, if necessary, 40 or 50 miles around, and if they will not buy, arrange to leave it on commission. See that they keep samples in a conspicuous place, and keep them neat. Of course this will cost money, but it is the only way to prevent the city jobbers from offering you *ten* cents for honey that is to be sold to the consumer for *fifty*. If you can arrange that the consumer pay 25, and you get 20, it is plain that both parties are greatly benefited. Our recent visit has given us an insight into the city markets, and enabled us to comprehend how even *women*—begging your pardon, ladies,—in the state of Michigan, can from 10 colonies get over a ton of honey, besides increasing to 40.

REPORT FROM JAMES BOLIN.

FRIEND NOVICE:—I think the season of 1875 may be safely set down as being at once the best and poorest I have ever known,—the best for rearing bees, and poorest for surplus honey. Fruit blossoms were destroyed to a great extent by frost in April. Of white clover there has been any amount all summer, and even at this date there is still considerable to be found, but so far as yielding honey, or at least surplus, is concerned, it has been almost a failure, owing to the wet weather. Basswood standing in the forest did not blossom to any extent, but a number of small trees that I set out in the springs of '71 and '72, were literally covered with blossoms, and I might add, with bees.

If they may be taken as a sample of what transplanted trees will do when those in the woods fail, a basswood orchard would be a good investment.

Bees procured honey enough during the summer to keep them breeding freely, but not enough to fill up the brood combs so as to prevent the Queens from laying enough to keep the hives full of bees at all times; that is, where the Queens were as prolific as they should be. Any Queen that would not keep her colony strong under such circumstances, was rated in my Apiary, as a four cent one, and her head pinched off.

I had a pretty fair example of the difference between 4 cent and \$25.00 Queens this season. I had a few of the former last spring, and their colonies merely managed to live while they were ruled by such *cheap* sovereigns, while others, that were no stronger early in the season, but having \$25.00 Queens, commenced swarming in May, and one of the swarms swarmed July 4th, after filling their hive and six 1 lb. boxes. Moral: pinch off the heads of all 4 cent Queens.

At no time during the summer has the yield of honey been sufficient to prevent a frame of empty comb that was inserted in the center of a colony having a good Queen, from being filled with eggs; and an empty frame inserted in the same way has almost invariably been filled with worker comb, which is seldom the case when honey is plenty.

I have never had natural swarms fill so large a proportion of their frames with worker comb as they have this season. This is no doubt owing to the poor yield of honey, the bees not being cramped for storage room.

Owing to the large number of workers and their persistent labors, more than to anything like a good yield of honey at any time during the season, they have been gradually filling up their hives until they are well supplied with winter stores, and will yield some surplus, but not one-fourth of what I expected. I cannot tell yet just what the yield will be, as much of it is on the hives yet. It will probably be about one ton—all comb honey.

Bees will go into winter quarters stronger in numbers than they ever have since I have kept them.

JAMES BOLIN.

West Lodi, O., Sept. 18th, '75.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT.

EDITOR AND PROPRIETOR.

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, OCT. 1, 1875.

Thou hast been faithful over a few things, I will make thee ruler over many.—Mat., xxv, 21.

ARE you "faithful" with your "few" colonies?

WE are testing a "Russian" Queen. Particulars next month.

"To bee or not to bee," as the man said when he got home and found a swarm of 'em settled on his front door-knob.

WE consider rubber gloves, or any other for handling bees, worse than useless; has any one found differently?

WE fear we have been a little rough on friend Coe's Apiary on page 131. The complications we referred to are the expensive ventilators, and the painted entrances. The hives are very simple and cheap, for comb honey. Yet we think Mr. Coe's claims in the *A. B. J.*, much too strong.

WE are very sorry indeed that we of necessity passed by some of our best friends in our recent trip, but we had a special route to take, and only had time to make very brief calls; besides had we undertaken to call on *all* our friends in Michigan, we should not have been able to get home before next spring.

IN our absence Miss A. occupied the "chair editorial," and has handled the reins so well that we have hardly an additional suggestion to make, unless it be that "A Mine of Sweetness" on page 130, should have a more severe rebuke. It is one of a numerous class of sensational items that are going the rounds of the press, and are sure to be received in perfect good faith by a large class of people who have no means of knowing the utter impossibility and absurdity of such statements.

WE were much pleased by a brief call from friend Newman, of the *A. B. J.*, a few weeks ago, and we take pleasure in assuring our readers that he has a sincere desire to make all matters of business perfectly fair and satisfactory, and that when mistakes *do* occur, they may rest assured they are unintentional. And while we are about it, we may say the same of the Editors of the *Magazine and World*; in our correspondence with them, we have always found them ready to stand a personal loss, rather than to have misunderstandings, and dissatisfactions.

AS friends Butler of Jackson, Townley of Tompkins, Prof. Cook, and the sisters we visited, all have successfully practiced wintering by covering the hives with a large box, and filling in between with straw or chaff, it would be folly in us to ignore such authority. We will give an article on the subject from Townley next month. He says the hives should be put up for winter *now*, while every thing is dry, and that the covering over them must be perfectly water-proof. We verily believe that the frosts of October and November do much injury, so we are much in favor of putting bees up early. We would have all secure as

soon as Nov. 1st at least. Now lest our beginners go heavily on this plan, we will say that it is not only laborious with many hives, but really more expensive than a bee-house; and the untidiness incident to so much litter is really much against it. The advantage is that the bees are at all times ready for a fly, whenever the weather is propitious, as they are in the house Apiary, yet many reports of disastrous failures have been sent in, when every thing, so far as we could learn, was as Mr. Townley advises.

SEPT. 28th.—A frost having cut off all supplies during our absence, we found all brood-rearing stopped and no eggs or larvæ to be found in any of the hives. The bees were so cross that it was almost out of the question to attempt to handle them, and robbers were on hand at every turn. As it would take some time to get feeders on all the hives, we filled 12 feeders and placed them in the open air, to see if we could not feed them into a better humor. We had hardly reckoned on the force that 108 colonies could send out, and came very near being frightened at the result, but it all turned out well with the exception of many bees that were killed in the quarrel to see which should get most. To-day we have made a larger feeder, and fed about 25 lbs. of sugar in about two hours; we made the syrup quite thin—sweetened water in fact—and the result has been quite satisfactory. We can now open hives without smoke, the Queens are all laying and pollen is coming in at a very satisfactory rate. If very thick syrup is used they gorge themselves, and then get down in the dirt and are lost.

SEPT. 29th.—Our out-door feeding is not very satisfactory; so much excitement, results in the loss of many bees, yet these may be only old ones. At present we know of no method of feeding so sure and economical both in time and sugar, as the Universal feeder. The larger part of our colonies have stores enough, and as these only need a little to keep up brood-rearing during this month, we supply this by feeding *dry* yellow sugar in the open air; this produces no unhealthy excitement.

NOTES BY THE WAY.

Continued from page 123.

20th.—*Manistee*.—Dr. Ellis commenced with 2 colonies in the spring, and now has 6 in good condition for winter, and has taken 125 lbs. with the extractor,—this with black bees. They were fed nothing, and are building comb and storing honey now.

We purchased one of Perrine's tumblers of honey at the grocer's; price 40c. for about $\frac{3}{4}$ lb. The liquid portion we judge to be principally glucose and sugar, but it is certainly pleasant to our taste, and if honestly labeled and sold at a fair price, we cannot see that it is objectionable.

21st.—Not to be impartial we should mention that we have had an *extremely* pleasant visit with two remarkably intelligent sisters who have recently commenced to keep bees. Altho' both seem to have their time fully occupied in the discharge of such duties as usually pertain to a life on the farm, they have this season secured from 13 colonies, 250 lbs. of beautiful honey in small, light frames, 500 lbs. or over, ext'd, and increased to 26 stocks, most of which have twice the amount of stores needed for winter. As we estimate it, their receipts will exceed expenses,—they have kept accounts very neatly,—more than \$150.00, valuing increase at \$10.00 each. Their bees are mostly fine Italians, and some of the best are from a \$1. Queen from our county. They have no clover, but an abundance of honey from the fireweed in the fall, and we were astonished to find this honey very white, and of a pleasant taste. The *extreme* neatness of their honey,—both kinds,—when prepared for sale, and its beautiful transparency and whiteness make us feel ashamed of our own.

As we now look out of the car window at the fireweed after it has gone to seed, it seems that thousands upon thousands of colonies might prosper in the wild lands of Michigan. Who will develop this great industry? Empty combs in this region would be of immense value, judging from the way in which the combs are all bulged out with honey.

21st. *P. M.*—Called on Mr. L. C. Whiting, Saginaw. Saw a hive that has already given two hundred and twenty lbs. box honey, and yet more than 40 lbs. are on it now, ready to be removed, and the same hive has given 50 lbs. extracted, besides furnishing frames of brood for an artificial colony. Although in the city, his bees are yet building beautiful, white comb and filling it with this same, white, fireweed honey.

22nd.—During a spare half hour we visited the grocers of Saginaw. Comb honey sells for from 25 to 30c., and no really nice honey was to be found. The boxes or sections were all dark and covered with propolis, which can all be avoided if the bees are kept from the outside of them. The Harbison section, or something like it, can be put in market looking as clean and bright as when it first leaves the buzz saw. You can select very white lumber for them, make them thin, and always sell them with the honey; never take them back to be refilled,—they cost less than 1c. each. The grocers—nowhere did we find extracted at less than 25c., and it was *not* neatly put up. Our marble table, we think, would do a thriving business in such a city. Perrine's honey, dark and untidy, was found all around at the usual prices, but it was a drug, as it deserves to be.

By the way, why cannot all dealers be pleasant? One man seemed to get mad at everything we could say in regard to honey,—that altho' he had sold several tons at 25c., could buy all he wanted at 15, would not give 20 for the finest that ever was, and held a chronic bitterness toward all bee-keepers. Others talked in a friendly way, and seemed to feel that producer and retailer might, nay, *should* have a friendly interest in each other's occupations even if prices do now and then fluctuate unpleasantly.

23rd.—We have been more pleased than we can tell, with our visit to the College Farm at Lansing, and we shall always feel under obligations to our friend Cook (Prof. of Entomology) for the many courtesies shown us. Altho' the College Apiary "petered out" entirely last winter, through, we suppose, putting a dozen stocks in a bee-house that was not proof against 31 degrees below zero; they started in the spring by purchasing two colonies, and these have been increased to eight good ones besides furnishing honey that was sold to the amount of \$30.00, (\$10.00 more than cost of original stock,) and more is to be taken from them. As Bee Culture is one of the branches taught, we had the privilege of talking to the students, and we can earnestly pray that more of the young men of our country may be induced to choose the pursuit of Agriculture for a livelihood, as have the 150 (about that number) intelligent, attentive, and pleasant faced students that were gathered before us. We do not see how *any one* who has any idea of *working* for a living, can help catching the enthusiasm that seems to pervade every department, from the

beautiful greenhouses, all the way down to the hog-pens. Prof. C. gave us the following item: Mrs. Baker of Lansing,—by the way, this lady is the wife of Col. Baker of the Booth tragedy,—commenced last season with two colonies, and the same season increased them to eight, and sold honey to several times the value of the original stock, this too, alone and unaided, save by the *advice* of Prof. Cook.

This afternoon we, in company with the Prof., had a most interesting visit with our old friend and subscriber, John L. Davis, of Delhi. Mr. D. has this season increased 39 stocks to 130, and has about 2500 lbs. comb honey, and 1000 extracted. Says he could have secured nearly twice as much, had he given them proper attention. Thinks about 5 times as much extracted, as comb honey can be secured when properly managed. Mr. D. has kept bees successfully for 40 years, and has never had any losses by wintering worth mentioning. His ideas are substantially the same as our own. For particulars, see his contributions in our back volumes.

24th.—Visited James Bolin's Apiary. It is really a miniature city with its 150 neatly painted hives, pretty bee house, tasty flower garden and grape vines. His report will be found elsewhere. We also visited the Apiary of Dr. Rubard, Mr. Scothorn and Mr. Heater, of Flat Rock, Seneca Co., O. The latter looks fair, but as all three of these Apiaries have been much increased, and some of them by novices, they have but little surplus to report. We don't want to see any more bees or honey just now, we want to see all the "dear ones at home," and home we have started on a bee line,—but wait a minute,—our trip to Mich. has not been a selected one, it was a random route so far as bee-keepers were concerned. We only called on those whose addresses we could remember, having no list of them. There are hundreds of just such successes,—is not Mr. Heddon answered?

One more item: nearly all we called on apologised for not having hives in better order,—didn't expect us, etc. Had we better not tell you all to constantly expect us?

P. S.—We pulled hives all to pieces nearly everywhere we went, used no smoke or veil, and have not been stung since we left home,—others were,—no credit due us, for nearly all our friends behave very badly when the bees begin to look into their countenances. Besides they don't dig the grass up before the hives, and stand them level and hexagonally, at least very few of them do. **HOMEWARD.**

P. S. No. 2.—We haven't seen *one* well made nicely fitting *quilt* since leaving home.

25th.—Didn't sleep in the cars *last* night, hence were in fine trim to scramble among the rocks, before breakfast, at the falls in Elyria. Felt so much refreshed that we went through the groceries in pursuit of honey again. This town is almost destitute of honey, and all we could find in the comb, was a paufal in a show window, that *our* readers, we think, would be careful to keep out of sight. Quart jars of extracted retail for 90c. Why do not hotels use honey? Although we have found all the delicacies of the season on the tables of our large, city hotels, yet we have failed to find a bit of honey of any kind.

Honey Column.

EDITORS OF GLEANINGS:—My father, Adam Grimm, ordered me to request you to state in your Honey Column, that he has 16,000 lbs. of extracted clover and linden honey, in barrels and firkins, of 375 and 200 lbs. respectively, on hand, which is for sale at 15 cts. per lb.

GEORGE GRIMM, Jefferson, Wis., Sept. 21st, '75.

Put me in your Honey Column for 3 barrels of fall honey at 12½ cts. per lb., *net, here*, and 500 or 1000 lbs. of fall comb honey at 20 cts. *net, here*.

JAMES HEDDON, Dowagiac, Mich., Sept. 20th, '75.

This has been rather a poor season for bees in our locality, but I have increased 12 swarms to 27, and will market about 800 lbs. of honey.

E. A. ZIMMERMAN, Lansing, Ia., Sep., 20th, '75.

DEAR GLEANINGS:—I have on hand and for sale about 1000 lbs. of nice extracted honey. The same is nicely put up in waxed casks, and will be delivered on board cars at Shelbyville, at 11 cts. per lb. Sample sent if desired. M. E. McMASTER, Shelbyville, Mo.

I have thrown out about 40 gallons of honey, it is very thick. I only extracted those frames that were sealed, and those that were heaviest. I will sell a barrel of it at 18c per lb., package included. I have it in jars, it is granulating fast. I sell it at 20c in a small way. JOHN W. WHITE, Chatham Centre, Medina Co., O., July 26th, '75.

Commenced with 5, and have increased to 11, (all full for winter) and extracted 946 lbs. honey.

You say you want the Honey Column filled up and also ask why honey does not sell in the cities. "It means to me," do not throw it out until it is cured, and then you can sell it near home if the honey buyers will not pay enough. Once a week I find will not do, and believe it should not be thrown out oftener than once in two weeks. The labor of uncapping is more, but it pays in satisfaction given. I have about 1000 lbs. to spare—300 lbs. old honey—which I would be glad to get 15 cts. for.

Wm. H. S. GROUT, Poland Centre, N. Y.

Our ideas exactly, except that although it may have taken two weeks to ripen, this season, it will during a drouth frequently ripen as well in one week, or even in three days at times; although we thought our honey was very thick this season, we feel ashamed of it after seeing such quantities that was so much better. Even honey that is capped over is not *always* thick. If you take a jar and give it a shake, you can readily see how thick the honey is; in cool weather it should move very slowly when the jar is turned on its side. If, like ourselves, you have some on your hands that is too thin, you had better go to the bother of evaporating it by slow heat, and then make up your mind that you will never take out *any more* such thin honey.

The following from Prof. Cook might seem a little contradictory, did we not know that the season has been quite dry at the College Farm. Very likely our honey would not make one sick, friend Cook, but we had about a half barrel that really commenced to sour. What is most singular to us, is that the thick honey settled to the bottom and was drawn off first, while the raw, unripened honey rose to the top and commenced to spoil.

Our bees have done exceedingly well this year. Profits per colony not less than \$30.00. We have had rather a dry year. Heavy rains during bloom are very injurious.

That honey extracted before it is capped is harmful or unpleasant is all wrong. We have given such honey each season for the last three years to 150 students, with no complaint, and perfect satisfaction. It is far less liable to produce sickness than thick honey. That is our experience every time. You may quote

me as saying that your extractor is *par excellence* itself if you desire. It is so easy to run, and yet sufficiently strong to answer every purpose.

A. J. COOK, Lansing, Mich., Sept. 21st, '75.

Humbugs and Swindles

Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

M. R. A. ROOT, Sir:—Please write me if A. Gray & Co. have quit selling aparian supplies; or are they dead, removed, or scoundrels? I sent them money in a registered letter last April, for a wax extractor; they got it, for I have the receipt. I have written them two letters since and they do not reply. If it is a bogus company all bee-keepers ought to know it.

D. L. BULER, South Fairfield, Lenawee Co., Mich.

We are sorry to be obliged to say that your money is probably hopelessly lost, and that you are fortunate in not having sent them a larger sum. A similar complaint is at hand from one who sent them the money for an extractor—all letters are taken out of the office, but no answer of any kind can be obtained.

METHOD OF SECURING HONEY AND TAKING CARE OF BEES.

BY ONE WHO SECURED 260 LBS. COMB HONEY AND 50 LBS. EXT'D FROM ONE COLONY THIS SEASON.

THE spring management consists in confining the bees by means of a division board, on as many combs as they can well cover, and no more; thus economizing the heat to facilitate brood-rearing. Now feed daily or allow the bees to pass under the division board, and obtain their food from honey stored in another part of the hive. Getting their food in this way causes them to feed the Queen as if obtaining honey from blossoms. Feeding the Queen causes her to lay.

This work should be done so as to have a numerous colony when the harvest of blossoms on which you depend makes its appearance. If this harvest is fruit blossoms, the work should be done early in the spring, if white clover is the main crop, later in the season will answer as well. Profit is obtained in bee-keeping from strong swarms only.

When these are secured, ample room to store honey should be given, by placing boxes over the brood chamber.

When they have a box two-thirds filled, put under an empty one. In passing through this to reach their partly filled box, those that are delayed in entering the upper one will begin to build in the lower.

Continue this process until there is room for all the bees to work without crowding. The workers will store more or less honey in the brood chamber; this should be extracted, and the empty comb placed between partly capped brood combs. The Queen is much more likely to fill these combs with eggs if placed in the centre of the brood chamber, thus keeping the brood combs for brood only.

To prevent swarming give more space in the brood chamber, or take away a frame of brood and place an empty frame between two straight combs in the center of the brood chamber.

The brood taken away can be given to a weaker swarm or used to build new colonies. If an increase of swarms is the object, divide a populous hive when there is an abundance of honey to be gathered. The colony left by this process without a Queen will immediately commence to build Queen cells. When these are capped over make as many nuclei as there are Queen cells, or as may be desired, giving each a Queen cell. Now build these up with frames of brood from strong swarms. As soon as they are able, give them room to build comb, using a division board the same as for spring treatment.

When strong enough give box room for storing honey as above directed. It is generally conceded that bees winter best in a cool, dry and dark room, kept at a uniform temperature.

East Saginaw, Mich.

L. C. WHITING.

Heads of Grain, FROM DIFFERENT FIELDS.

FRIEND NOVICE :—This has proved the poorest season for honey I have known in my experience of 8 years. White clover is our main dependence here; there was an abundance of it as usual, but it did not appear to yield honey of any account. One cause, however, of my small yield is the amount of black blood introduced into my stock—having purchased largely in my anxiety to become a *big bee man*. However, throwing aside my ideas of visionary profits, I shall make a fair summer's work of it. My leisure time in consequence of lack of honey, I am improving by Italianizing my bees, and making changes in every direction. I am full of hope for the future, and shall not knowingly omit any necessary preparation for next season's campaign.

I too am hatching Queens by *lamp-light*; aint it jolly fun? Give us a picture of the "Octagonal Apiary" when you get everything arranged *lovely*. Go on and prosper in every way, but don't more than you can help, fix up nice, costly affairs for your pets, and then tell us how charming they are—it makes us feel bad to think we can't have such. G. C. MILLER.

St. Hanley, Annapolis Co., N. S. Aug. 12th, '75.

Just as soon as it is decided that "house Apiaries" are really a success, we shall try to see how cheaply they can be made. Perhaps by clipping off all needless expenses, and bringing it down to the very closest figures, we may, as with the \$1.00 hive, find that we are really better off, in having all that is needful and nothing more.

Please permit me to talk to you in a friendly way, the way in which all true bee-keepers should address each other; and first, I don't like you to use the old, hackneyed term "Novice," when you are not a *novice in bee-culture*; a moment's careful thought will show you that I am right in the position here taken. The term "Novice" is liable to deceive, which I know and feel you have no desire to do.

Although you and I differ on many points, we agree in the main. I must say that your suggestions in relation to Queen raising, in the Sept. number, are the best I have ever seen;—there may be a little selfishness on this point, for your experience and mine agree almost exactly. I have bred the Italian bee since 1861, and very carefully too, changing blood every two years, and my experience with Queens is similar to your own.

And now again I must scold you a little, do you not think the dollar Queens have a tendency to *depreciate pure Italian stock*? I cannot raise *pure Italian Queens* at \$1.00 each, neither can you; and if forced to compete with \$1.00 Queens I shall most surely buy them of parties who are willing to insure them, as it would not pay me 2 per cent on money invested, to raise and sell them at that price.

For every Queen I sell (*insured*) I get \$5.00, to those who introduce themselves I sell at \$4.00 each; and I shall put my bees to honey gathering when I cease to realize these figures, as it will pay me much better than Queen raising. I have taken as much as 113 lbs. 11 oz. of honey and an artificial swarm from a single colony, so you need not wonder that I do not take any stock in the one dollar Queen business. "B."

Thank you, friend "B.," we like plain letters, above all things. In regard to "Novice," it seems to us that so long as we lose bees at the rate we have done for several winters past, we all might with equal propriety be termed "novices." Again, it is our friends who seem to prefer to address us thus, and as we dislike to put into our contributors' letters anything they do not say, we cannot well do otherwise than let them say "Dear Novice," if they wish. "*Vox populi*," etc."

As to \$1.00 Queens, alas for theorizing! the time for discussing the matter has gone by. It is now quite a large and profitable industry,—profitable alike to the purchaser and producer, and we fear you have not kept pace with the times, or you would see that every \$1.00 Queen rearer is of late using only imported

mothers. Do you mean that we could not rear 1000 Queens in a season with 100 stocks of bees? If we cannot, we have many readers who can.

Last year I experimented, feeding 3 stocks syrup of coffee A. sugar for the purpose of comb building. I used the tea-kettle feeder, and was but a short time feeding a barrel of sugar. I concluded it didn't pay. This summer I tried feeding for the same purpose, again, using about a pint of syrup a day, made of brown sugar costing from 8 to 9 cents per lb. The result has been very satisfactory. One stock a late swarm with a young Queen constructed 5 worker combs and 2 drone combs. Another, (also a late swarm with a young Queen) after constructing 2 or 3 worker combs, commenced drone comb. I then took away all their combs but one, gave them two empty combs, and they made worker comb again. I thought I would try a stock with an old Queen, that had not swarmed, and was quite strong; (by the way, I call this my lazy stock as it did not gather half as much honey as it should considering its size). But they built drone comb almost from the first. This may have been owing partly to the fact that I fed them a quart per day, instead of a pint as I did the others.

The cost, leaving out of the account the drone comb, was about 35c. per square foot, from which is to be deducted the syrup stored in the upper part of some of the combs and the value of the brood with which the combs were well filled; this would reduce the expense considerably below 35c. As to how much honey was being obtained from the fields you can judge from the fact that one of my stocks got out of stores, and commenced to drag out the immature brood.

I have been trying some of Mr. Long's *foundations*. To fasten them I just slipped out the guide of a Standard frame, bent about a quarter of an inch of the upper edge of the foundation at right angles, covered it with the guide, and tacked it in the centre of the top bar. Of course the guide is shortened enough so that there will be room for it between the two end pieces, and is laid flatwise on the one fourth of an inch or more of comb foundation bent at right angles. The foundations are very nice, but I am satisfied that I can get combs constructed cheaper without them, than I can with them at a cost of \$1.00 per pound.

E. KIMPTON, Cedar Creek, N. J. Aug. 16th, '75.

All experiments of our own, result quite satisfactorily in favor of the foundations, and particularly, because the bees will draw up the wax of the foundations into beautiful cells, on an amount of feed that would not induce them to *build* comb at all. In one case they raised cells in a comb,—or sheet of foundations, rather,—that was placed in an empty upper story, and this at a time when they were getting so little honey that they would not have built combs even had an empty frame been placed directly in the centre of the brood.

Again, in the experiment mentioned elsewhere, we gave two colonies 5 lbs. sugar each, and a third one a much less quantity; now the latter finished one most beautiful comb from the foundations, and the one having the yellow sugar made two similar ones, while the one that had the 5 lbs. of coffee A. sugar did not build new comb to the amount of $\frac{1}{4}$ of a frame full. Now although we feel sure we are right, yet we may be mistaken, there are so many circumstances to be taken into consideration, and we shall be very glad to hear from others who have made like experiments.

Sept. 13th—The *Mag.* for Sept. is just at hand, and in it we see that Mr. D. M. Quinby has made a great blunder in supposing that the bees use the foundations, leaving the wax of the thickness that Mr. Long makes it; whereas, it is all brought to the most delicate thinness, before any honey is deposited in it at all. Some of that furnished by Mr. L. was so extremely white and delicate, that we wrote him asking if it were not something besides wax, but his reply was that it was pure wax simply

bleached in the sun. In our opinion nothing *can* be nicer for comb honey than the bleached wax foundation, and we have great hopes that by its aid we may eventually furnish beautiful comb honey at something like the price of extracted. Mr. Q. is right in saying that we often have nice comb honey spoiled by a piece of old tough comb that has been used as a guide, and it is just here that we are going to profit, for the foundations make the most beautiful, white, delicate guides that can be imagined, and are very easily fastened in the boxes. We feel sorry that Mr. Q's article was allowed to appear in print, before being submitted to some one who had really made a practical test of the artificial comb for box honey.

FRIEND NOVICE.—A severe frost on the 22nd of Aug. put a stop to our honey business. Up to that time we had taken about 4000 lbs. from the 50 stocks we had in the spring, and we now have 60, with honey enough to winter them, I think. Have had no offer for my crop, would take about 14c., it is mostly white clover, and very nice.

Have just settled with Barmmeister & Co. of Chicago for part of last year's crop; they dissolved partnership with but little to pay their debts, and I finally settled with them for 25c. on the dollar, being a loss to me of over \$100.00. Kernberger (one of the Co.) still does business at the old stand, and advertises in the *A. B. J.* for more honey. I hope he will not find many so green as J. L. WOLFENDEN, of Adams, Wis.

We give the above, not with a wish to injure any one who does business honestly, but to warn those of our readers who have honey to sell, against falling into the same trap that friend W. did. Be sure your honey,—if not sold at home,—goes to a responsible party.

A correspondent sends the following:

A MINE OF SWEETNESS.

Generally when we hear of rich strikes it is in the gold or silver line, but this time it turns out to be honey, pure and sweet. A few days since, as the workmen on the tunnel at Cajon Pass were hauling over some rocks they came across a deposit of honey, and taking a pole and running it into the mountain, were surprised to find no bottom. They got a long pole some twenty feet in length, and were unable to touch bottom with that. Upon withdrawing the pole the honey began to run out, and soon tubs, buckets, and two barrels were filled, and still it flowed. Some parties came into town and loaded up with barrels, and propose to make a business of it. They put in a charge of powder and blew off a portion of the rock, which disclosed tons upon tons of honey. Our informant states that after exploring it from below to where the bees were found to enter, it was found to be one-fourth of a mile, and in his opinion the whole cavity is filled with honey. He estimates over one hundred tons in sight, and believes that one thousand tons would not be an unfair estimate. This immense deposit cannot be equalled by any ever found. According to the above estimate it would take every barrel and hog-head in San Bernardino to hold it.

Ho! for California. 'Tis said its fruits lack flavor, its stories certainly don't.

GLEANINGS.—I wrote you in Aug. that I had one swarm in which much of the brood died about the time it should have been sealed. The Queen was old. Since then they have raised a young Queen. Not one cell containing dead brood is to be found. Have never seen (Simon Pure) foul brood, but fear it. Is there any danger of introducing it with Queens?

OCCASIONALLY.

We have had no experience with foul brood, and hope to be exempt. We certainly would not like Queens sent from an Apiary in which it prevailed.

GLEANINGS.—Our 75 colonies have increased to 175—sold 75 of them—extracted only 2000 lbs. honey. Will get as much more this fall, if the wild Aster is not dried up too much. Bees have gathered enough

at all times this year to keep up breeding. We will have our 100 colonies shipped from Indianapolis here for winter, in this month. They have done poorly up there, too much rain. **BAILEY & PEXTON.** Edgefield Junction, Tenn., Sept. 9th, '75.

Does change of locality for wintering, or for short times during heavy yields of honey, really pay? Will not those who have had experience report?

Our bees commenced gathering honey Aug. 9th, and continue to bring it in rapidly; 7½ lbs. from one hive is our best yield per day so far. We commenced extracting Aug. 20th, took 2½ 44 gal. bbls., and have as much more ready, and we'll go for it in a few minutes.

T. E. HARRISS & BRO., New Frankfort, Mo. P. S.—57 hives and one box are our number.

MR. A. L. ROOT. Dear Sir:—Your sample of honey rec'd. It does not equal the quality of honey raised here. As I am the only one in the vicinity using an extractor, I have to furnish a first quality of honey in order to sell. I am a beginner in bee-keeping. I received the 14th day of May from Dufant & Son, 4 colonies of Italians, 3 of them in good order, the other so weak that I rec'd but little help in building up my number. I now have 11 good colonies, they have made about 150 lbs. like the sample I send you. Shall have from two to three hundred lbs. of fall honey if the frost holds off as late as it usually does. We had no fruit blossoms, so my bees made no honey until white clover came into bloom. I have taken no honey from the lower story. I had also the inconvenience of having to use two different sizes of frame in ONE hive as well as not having a Mrs. O. to help. I would like to see a Katie Grimm or any other Katie who could sling out a barrel of such honey as mine in one day. I would try hard to convince her that Mrs. Katie Oliver would be a much prettier name for her.

CHAS. OLIVER, Spring, Pa., Sept. 13th, '75.

We can thoroughly understand your trials with different sizes of frame. It's so provoking after making all our plans for building up a nice colony, to find the frames won't go where we want them to.

We are sure that somewhere in the wide world there must be many Katies, if one were only fortunate enough to find them. Diamonds in the rough, perhaps, close by us. You know about "entertaining angels unawares."

We have had a good honey season here. I have taken from 8 stocks and their swarms, over 1300 lbs. of honey. Bees all black. Have received this fall no less than 7 tested Italian Queens, and so far have only succeeded in introducing 3. I followed the plan of preventing swarming as far as possible until the honey season was over, but shall not do so again. Have had fearful work, since the middle of August, with robbing; found it impossible to open a hive. I have now 14 stocks in fair order, but not so good as they would have been, could I have foreseen that the season would close by the middle of August. It was the same last year, but was then said to be exceptional. I have had bees for only 2 years, but so far have been rather fortunate. **S. C. BENNETT.**

Smith Lake, Minn., Sept. 11th, '75.

My honey harvest so far, has been fair, and if I do as well the remainder of this month as in years past, I shall be well satisfied. I have a little over 700 lbs. of extracted honey, taken mostly from three hives. About the 15th of Aug. I extracted from one hive 47 lbs., and in four days extracted from same hive 11½ lbs. The other two did almost as well, the hive is a one story with 20 frames. It was the finest as well as whitest honey I ever saw. It was gathered principally from the blue Vervain which grows here on the river bottoms in great abundance. The remainder of my hives I have worked for box honey, have taken already over 100 lbs. from several of them, and they are filling up finely again—think I will get some of them up to 200 lbs. Kept them from swarming mostly, having only two swarms more than I commenced with last spring.

Now I wish to gossip a little about a bee house. It is a little singular that so many just now, happen to have an idea of a bee house. I once thought I would not have one if it were given to me, and I would not, like most I have seen. My nearest neighbor has one—I know it is for bees, for I can see through the cracks

the shelves etc. He never put bees in it but once—fell short of bees.

This lugging of hives has set me thinking that a house with hives in *summer* and *winter* and large enough to store honey and tools, would be just what is needed. I do not want anything to do with a house that is not frost proof and sure to winter, for my cellar has never failed to winter well. And now a word about cellars. Of course they should be dry and dark. But I have an *idea*, that the sitting-room over this cellar with a constant fire night and day—wife and children running down cellar a half dozen times per day, *does them no harm, but rather good*, to say nothing of the thumping of the piano above them. You get my idea. But to the bee house. In thinking the matter over, I don't see how I can collect box honey in your house, or any other for that matter, with my ideas of what a hive for box honey should be.

The only chance to place boxes, that I can see, is on top and back side from the entrance to the hive. Now in one style of my hives (same frame goes in both) the boxes are at the end of frames as well as on top, in the other style the entrance is at the end (the end board is removable) with three tiers of boxes over the same, while over the frames I use Harbison's style of small frame or case. I cannot see how I can use side or end boxes and have it handy, without great waste of room. Can you help me? Your house, in form suits me much, and I think it must be just the thing where the object is to extract honey.

As you have seen Faulkner's and Coe's bee houses, I would like your opinion which is best.

Yours truly, R. H. MELLE.

Amboy, Ills., Sept. 8th, '75.

We have seen Coe's house Apiary, but only a description with drawings of Faulkner's, and to be frank, both seem to embody a mass of complicated fixtures that would be worse than useless to us. If you use the Standard frame or stand the L. frame on end, you can put boxes both on the sides and top as you wish; very likely boxes at the end of the frames would be preferable. We agree that the house should be frost proof, but after this is done, the expense of hives is far less than even the Simplicities.

DEAR NOVICE:—I have not told you what bad luck I had wintering my bees last season, but will tell you now. But don't put me in your column of "Blasted Hopes," for my hopes are not blasted, and in fact they never were.

Well, I had 20 stocks in the fall, and in the spring I found I had but 3 living. From then I have increased to 14, and have taken 400 lbs. of as nice honey as I ever saw. There was so much rain the first of the season that bees did but little, but from the last of July to the present date, I never saw the honey harvest better. No frost yet, don't look for any for 2 or 3 weeks.

I have several Queens from one of Dadant's imported ones. I find them very prolific, and their workers are splendid honey gatherers. Bees are still swarming here, I know of several swarms that came off this week. Success to your house Apiary.

As ever, yours, Alfred McMains,

Chariton, Iowa, Sept. 11th, '75.

We are glad, indeed, you're not a candidate for "Blasted Hopes." We like the "merrie" heart, under all circumstances.

TO A. I. ROOT & CO., GENTLEMEN:—As I see you have no report from this Territory, I write you a few items.

Bees have done well in this part of the globe, both in increase of swarms and honey, with very little disease among them, though there is some foul brood in our midst, in all cases of which, our conventions advise destroying bees and comb, so as to eradicate it from our midst. At the last convention the wholesale price of honey was fixed at 25c for extracted, and 35 for comb. A good round price, don't you think so? It will have to come lower than that before we can drive the adulterated stuff (called by the above name) that comes from East and West.

Our principal bee pasturage in spring is fruit and forest blossoms, though we have almost every variety, in fact our city looks like one vast flower garden when they are in blossom. Summer Alsike and white clover, and sweet or California clover which lasts until frost comes and even after, but our farmers do not

like it. Still it grows in spite of them, and we (as bee-keepers) rejoice in its efforts to supply our bees with a most delicious honey, a perfect amber in color. Then we have for a fall plant the Rocky Mountain Bee Plant. You just ought to taste the honey from it, it is two weeks since I tasted it, and methinks I can taste it yet. It is now in full bloom.

Two weeks ago I opened one of my hives and found no brood in it and but very few eggs, while all others were full of brood; but this had 6 or 7 frames literally crammed with honey. Now had they crowded the Queen out, or had they lost and just replaced her, there were no drones in the hive and none in any of the others. These are my two theories. Have you any other? If so let's have it.

CYRUS H. GOLD, Salt Lake City, Aug. 30th, '75.

We think, if there are other bees near you, either theory may be correct.

FRIEND ROOT:—Your letter of inquiry is received, and I will give you a few items concerning my bee business. I wintered 75 colonies, losing none. I purchased the entire stock of bees belonging to E. Gallup, consisting of 15 strong and 3 weak colonies. The season was remarkably poor until July 15th, when basswood came into blossom. The first three days were wet and cold. Commenced extracting the 20th, and continued till the 30th. I had then taken over 7000 lbs.; have taken about 1500 lbs. box honey and the hives are all full of honey and bees, and were never in better condition. They are now bringing honey from clover and golden rod. They have stored honey since the basswood harvest continually. I find ready sale at 20 cts. for extracted and 25 for comb honey. My extracted honey is all of the finest quality.

J. W. LINDLEY, Mitchell, Iowa, Sept. 10th, '75.

Has not Mother Nature given you western people the advantage, in the larger quantities of basswood supplied by her forests? Does it not more than compensate for the lack of clover?

And your western basswood honey has such a nice flavor.

MR. ROOT, Sir:—Yesterday, the 8th I received my extractor in good condition. Am well pleased with the machine. I extracted 140 lbs. yesterday from 30 frames. Bees doing splendidly. There will be more honey gathered this year than for several years past. G. W. Kennedy, Carrollton, Mo., August 29th, '75.

DEAR NOVICE:—Permit me a word to friend Moore regarding the "house Apiary." On page 169 of GLEANINGS for Sept. he says, "The idea that you and Mr. Coe advance, that bees will not sting in the house is all bosh; it won't go down." Now if "*bosh*" and "*won't go down*" mean anything naughty, I am sorry they implicate "Novice," as we alone are responsible for the "*idea*" in question.

Mr. Moore is using a "Faulkner House," and is no doubt entirely correct in saying that he "would rather by half handle bees out of doors," and that he "thinks less of it every year he uses it." But the "*idea*" that we "*advanced*" referred to "Coe's Apiary," which Mr. Moore has never tested or even seen; consequently, he is not qualified to judge of its merits. As yet it has not been offered for sale, neither will it be, till thoroughly tested by practical bee-keepers. If it proves valuable to the fraternity, and capable of overcoming some of the difficulties now experienced in bee culture, the labor and money expended in perfecting it will never be regretted. A. S. COE.

Mont Clair, N. J., Sept. 11th, '75.

From all accounts there was but little honey taken this season in California. Most of our Apiaries have no surplus, and many even have to feed. I did not get a natural swarm this season out of 170 bee hives. I get between 8 and 9000 lbs. of extracted honey. Compared with last year's crop of 22000 lbs., it is a poor season. The frost in April was the cause.

P. PHILLIPS, Los Angeles, Cal., Sept. 6th, '75.

My bees have done nicely the present season, and I have several tons of comb honey ready for market.

J. E. CRANE, Bridport, Vt., Sept. 3d, '75.

We have not had a very good season for honey. The yield from clover was fair which gave us plenty of new swarms, but basswood was a failure. I wintered but one of 17 swarms. Bought six more in June for \$24.00, have increased to 18 and taken 200 lbs. Honey, 50 lbs. box, balance extracted.

DAVID HILL, Warsaw, N. Y., Sept. 14th, '75.

The way the bees have started this fall, in many places where they had heretofore done almost nothing during the past season, is astonishing. Listen:

Since the middle of Aug. good stocks have brought in about 2 lbs. per day, strong ones more, and weak ones less. The yield will continue till the frost cuts the flowers off. About 3 acres of buckwheat within range of my bees. About 100 colonies in town.

T. G. MCGAW, Monmouth, Ill. Sept. 4th '75

DEAR NOVICE:—Our bees have been of but little use until within the last 3 weeks; they are now doing splendidly and making honey like fun. I am working for box honey mostly, it sells for a little better price, and much more readily than extracted honey. I sell box honey and cannot supply the demand at 25c.; extracted, for 20c., and but dull sale. We are having a terrible time here, with our bees swarming out. I am not troubled so much as some of my neighbors.

It is a fearful task to go through our bees now and keep the Queen cells destroyed, everything is so crammed with honey. The general cry is, "bees swarming," "don't know what to do," etc., etc. My neighbor, W. O. Parmenter, has much trouble from his bees swarming out; I have to laugh every time I see him; the first thing is, "bees been swarming again." By the way, he is coming to your place this winter, visiting, and you will get enough from him on the bee subject, as I want him to get full and run over enough so that I can get some good, practical ideas from your bee-houses, etc. But some one on this swarming question: I don't think bees are so liable to swarm if they are kept well ventilated and shaded, with plenty of room in which to work and store their surplus honey.

I make my honey boxes 12 inches long, by 6 wide, with 3 holes for bees to pass through from below, and one glass side lengthwise of the box; I think putting a small piece of comb 2 or 3 inches square, in the box, (heating and sticking it in the top of the box,) makes the bees commence working sooner.

Don't you think it late for the bees to swarm, and would it not be best to put them back in the old hive again, and give them more room above, with plenty of ventilation?

Wintering bees is the great question in this part of the country. I have wintered mine for 3 years in my cellar, and am convinced that with proper care, it is a good place to keep them in. My cellar is dry and well ventilated by stove flue. I use the L. hives, put them in, one on top of the other, leaving the honey boards on, with 4 holes open and top covering off. I put the lower tier of hives about 2 or 3 feet from the bottom of the cellar, with front of hive next to the wall, and keep the cellar dark as possible, and at a temperature of from 40 to 50 degrees. I seldom if ever lose a stand of bees kept in this way; the main thing is to keep them well ventilated, in order to allow moisture to pass off instead of congealing in the hive. A cellar with a board floor would be best, I think.

Accept my regards and best wishes for yourself, family and little "Blue Eyes." (I have a little Gray Eyes, about the same age; she doesn't fear a bee as much as I do, and likes "honey juice," as she calls it.)

I. N. ELLIOTT, Chariton, Iowa. Sept. 2nd '75.

It certainly would seem strange to us to have swarming in Sept., and if we could not give the bees empty combs, or room in some shape for all they might gather, we should feel that we were a "small" bee-keeper indeed.

Has no one tried the foundations in such a case? We have little faith in the efficacy of cutting out Queen cells, with the Italians, and in fact we do not know that it ever did any good with *any* bees. Plenty of room and empty combs have been abundantly proved, but is it not possible that cutting out Queen cells is only one of the errors that have been so long copied that—? If the nights are cool we must be careful about too much ventilation, but shading the hives we think quite important;—if you don't use the house Apiary, plant the grape vines.

In regard to that visit, we are always glad to see our friends, but there are a great many of them, and if you should come at a time when we are very busy, as is often the case, you

might go away with a much poorer opinion of us than you had before making the visit.

So far as our Apiary is concerned, you are all of you most heartily welcome, and we are glad to have you open hives, help yourselves to honey, grapes, or whatever you wish, if you will pleasantly excuse us when we feel that duty demands that we should keep on with the work that very often is piled up before us.

Again, there is a class of people (we are very glad to be able to assure you, kind reader, that *you* are not one of them,) who think and even say, in fact, that they don't want a Journal, for they prefer to come and *see* how we do things, and these people will sometimes come on Saturday, and commence asking questions that would be kept up all through the Sabbath, had we not of late decided it to be a positive duty to decline trying to answer them. They will commence by asking why we place the hives on the ground, then if there is such a thing as a Queen in a hive, how we keep them from swarming, how we raise Queens, how we divide colonies, etc., etc., until we would most cheerfully make them a present of the whole back volumes, and in fact, almost anything else, if they would only give us a little respite. Very likely we had planned in the morning that a lot of goods was to be sent to some one who had been waiting patiently, or that a heap of unanswered letters was to be attended to, but yet night had come and it was all undone, just for one individual who could not afford to take GLEANINGS.

Of course this does not apply to those who have followed us through all our work for years past, and who are qualified to teach as well as to be taught, for such we are always glad to see.

Bees have been doing well since the 1st of Aug., and swarmed at a great rate up to Sept.; I returned nearly all of my natural swarms in Aug.

Please state in GLEANINGS if there is any sale for propolis; how much is it usually worth?

WILLIAM TROYER, Annawan, Ill., Sept. 6th, '75

Propolis? Yes, who wants it? We should like very well to shake hands with some of our readers who don't have any, when it gets the ends of our fingers all stuck together, as it does nowadays when we open hives.

Bees have been working splendidly for the past 4 weeks, white clover is yielding honey now, which it did not do last spring.

J. SCHOLL,
Lyons Station, Ind., Sept. 9th, '75

P. S.—My 80 stocks wintered without loss.

E. BROWN, Port Rowan, Ontario, Aug. 23d, '75

A neighbor who keeps a few bees, and winters them on summer stands, experimented in the following manner: Three years ago he suspended a colony several inches above the bottom board, and wintered them in that position. The following winter he lost one half of his bees, those left being very weak, except the suspended swarm, which seemed stronger than before. At last accounts he expected to suspend more colonies in the same manner. It appears to me that in some localities bees need a great deal of ventilation. C. F. SLOUGH, Collegeville, Pa., Aug. 21st, '75.

The same thing has been suggested several times, but we believe it has not been found to be of any particular advantage generally.

Having sufficient space between the combs for the dead bees, etc., to fall below the combs, may be a good idea, but we have the same thing in all hives that have not built their combs clear down, and we cannot learn that such usually do any better than others.

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PRICES, \$8.50 TO \$10.00.

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IN ORDERING, be particular to give us *outside dimensions* of frame or frames to be used. As we have prepared the machinery for making every part on our own premises, we can supply Gearing, Honey Gates, Wire Cloth, etc., etc.; Bearings, Stubs, Steel-Boxes, self-oiling. A. I. ROOT, Medina, Ohio.
P.S.—Be sure and give width, *under* top bar of frame.



You cannot look over the back No's of GLEANINGS or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—“Dear me what a bother—I must have last month's Journal and it's no where to be found.” Put each No. in the Emerson Binder as soon as it comes and you can sit down happy, any time you wish to find any thing you may have previously seen even though it were months ago.

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A. I. ROOT, Medina, O.

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Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO.

BY A. I. ROOT.

Vol. III

November, 1875.

No. 11

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. Clarke, and Mrs. Tupper.

Bee-Keeper's Magazine. King.

Bee World. A. F. Moon & Co.

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.]

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ARTIFICIAL HONEY COMB FOUNDATIONS. A GRAND SUCCESS.

MANUFACTURED

6 Inches (or less) wide, and 16 Inches (or less) long, Cells 1-16 Inch deep.
ONE DOLLAR PER POUND.
20 Cents per Pound pays the Postage, I will pay Freight on 10 Pound Orders.

MONEY MUST ACCOMPANY ORDERS.

JOHN LONG, 522 Hudson Street, N. Y. City.

DEAR SIR: *Amboy, Ills., Sept. 24th, '75.*
The Foundation Combs you sent me were rec'd all right. I at once experimented with them. Extracted honey from one in three days after placing it in the hives. They are just the thing so long needed and can be used for almost every purpose and way about the hive.

Signed, Yours truly, R. H. MELLEEN.

DEAR SIR: *Brookfield, N. H., Sept. 11th, '75.*
The Combs are perfectly satisfactory. This lot I put into 19 Langstroth frames and put in upper and lower stories both, between full combs in various hives. Some combs were wet with sweetened water, some were not, it made no difference. Some of them are full of honey cells lengthened out and partly sealed.

Signed, Yours resp'y, E. C. NEWELL.

DEAR SIR: *St. Johnsville, May 18th, '75.*
In a hive that was about ready to need combs I put a large frame containing half a dozen small ones, small ones 5x6 square, in half of them I put pieces of Foundations, in the other half I put a guide of wax across the top one-fourth inch in width. Bees have commenced on both alike; cells in Foundations half an inch deep; some honey but no eggs yet. A great many will want a small quantity at first. If I could see you I think I could make some valuable suggestions.

Yours, M. QUINBY.

DEAR SIR: *Colerain, Mass., Aug. 16th, '75.*
Mr. Langstroth sent me some days ago part of sample of your Foundations which I placed in a colony and fed them, (as the bees are getting no honey) I would say that we were well pleased with the way the bees lengthened out the cells.

Wm. W. CART, Sr.

DEAR SIR: *Greenfield, Mass., Sept. 13th, '75.*
Those specimens of Comb Foundations were put as I informed you they would be, into the hands of others for experiment, as I have no bees. Mr. Cary who is an expert showed me combs very beautifully finished from a Foundation.

Yours very truly, L. L. LANGSTROTH.

DEAR SIR: *Christiansburg, Va.*
I am much pleased with the get up of those Foundations, and know from experience that they will answer a good purpose.

Resp'y, J. R. GARDNER.

DEAR SIR:—My experience with your Foundations this year is but a repetition of last years'. I can only say with Mrs. Tupper, "they are as perfect as can be." I have noted the objections of Mr. Quinby, and as proof positive of his error send you a complete comb, filled and sealed.

Your friend, AARON PENNINGTON.

DEAR SIR: *Monroe, N. Y., Sept. 11th, '75.*
Enclosed you will find P. O. order for \$5., in return please send me by express five pounds of your artificial Comb Foundations. The only objection I have seen made to these Foundations is that the centers will be "thick and tough;" this to me is a recommendation, and I think will enable me to ship honey in the comb with more safety, the combs being less brittle.

Respectfully, THOMAS SHARRON.

DEAR SIR: *Borodino, N. Y., Sept. 13th, '75.*
Your card is at hand. Would say that owing to the delay caused by the money not leaving this office I did not receive the Foundations until our honey harvest was all over. I filled six boxes with them and in seven days had them filled and capped over.

G. M. DOOLITTLE.

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OF ALL HONEY
PRODUCING PLANTS.

CHINESE MUSTARD!

BEE-KEEPERS! TRY IT.

IT GROWS almost any where, is not affected by severe drouth or frost, blooms over 70 days, yields enormously, and is as staple as wheat, sent postpaid, with directions, etc., 1 lb. \$1.75. Three lbs. and over, by express, not prepaid, \$1.50 per lb., per oz. 15 cents, package 5c. Also Black Mustard postpaid! 45c. oz. 10c. Motherwort, oz. \$1.00, pkg. 10c. Linden (*tilia Americana*) per lb. 75c. Melilot (sweet clover) lb. 25c. All warrant pure and reliable.

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1875. ITALIAN BEES. 1876.

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IN SAN DIEGO, CALIFORNIA.

I AM now prepared to fill orders for Italian Bees at the following prices.

For pure Italian with tested Queen, from \$15. to \$20. per hive according to number purchased by each customer.

For ten hives or more of good Italian stocks, each, per hive \$10. All in gold coin.

Bees are in the California or Harbison hive. The hives are made of the best material and workmanship, and well painted.

The Queens are all of the present year's raising. The combs are all straight and are also mostly of the present years make. In short, all are in as perfect condition as can be found in any apiary in the World.

Send stamp for circular.

Terms cash.

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2m San Diego, California.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

NOVEMBER 1, 1875.

No. XI.

PROTECTION FOR OUT-DOOR WINTERING.

FRIEND NOVICE:—We are not feeling very well just now, we are a little "out of sorts," somewhat "huffy," our "clander's riz." Prudence would dictate us to keep quiet, to smother our indignation, but unless we in some way "give vent to our pent up feelings" we may be permanently injured by having it strike in. There is perhaps no man in America that we would enjoy a good social "bee chat" with better than with yourself, and yet here you have been perambulating, shying through this state, almost within cannon-shot of our bee yard and have "passed us by on the other side" without even as much as, "our compliments sir!" To say that we are angry would be "putting it" mild, why, my dear sir, our ears fairly tingle with rage; we are so mad we are almost provoked. Perhaps we ought to excuse you in consideration of your having two ladies in charge, but had we been at friend Butler's just twenty-four hours sooner we should have monopolized your time an hour or two in spite of the ladies, at the expense of a fifty mile trip with you on the R. R. We will forgive you on one condition, viz.: that you put one average stock of bees away in winter quarters *a la* Butler and note the result. Make the box water tight, so that no water can get in from outside, and large enough to give you a space of three or more inches between hive and box, on all sides, and top of hive. Arrange the entrance so that it *cannot* get clogged with dead bees, (old bees will die, no danger of ice) take off top board or cover, put two sticks an inch apart across the centre of frames for winter passage, cover with cloth or mat, (we use old worn out grain sacks cut in pieces of suitable size) pack the space snugly with dry wheat chaff or finely cut straw (sawdust is not good) and leave them there till fruit blossoms or longer, next year. On some cold freezing morning next April open this hive and notice the difference between it and those outside. See how warm it is, how nicely the bees are spread over the combs in all parts of the hive while in those outside, they are packed in a snug, compact, winter cluster, with more or less dead bees outside of the cluster, killed by the cold. We now have 60 stocks snugly packed in boxes, all ready for winter, where we shall leave them, with but little care and no anxiety for the next seven or eight months. We are so well pleased with our success in wintering and *springing* bees in these boxes for three winters past, that we shall continue it until we do meet with disaster.

Friend Novice, please pack one hive away as above described, *now*, and give it a fair, impartial trial and oblige,
Yours truly, J. H. TOWNLEY.
Tompkins, Mich., Sept. 22d, '75.

PREPARING YOUR BEES FOR WINTER.

ON page 97, Vol. 2, we gave our ideas of how best we might avoid loss in wintering, and from the way in which our bees wintered we have no reason to change our views. On looking over our bees to-day, Oct. 6th, we almost feel as if we could point out which colonies would winter, and which would not. We feel sure that dampness in some form or other has much to do with the recent losses, and we most heartily agree with friend Townley, in advising that they be all "fixed," whatever the plan may be, during warm, dry weather. So

far as we can recollect, our bad losses occurred when we had housed our bees during cold, wet weather; and indeed in the fall of '73 they were housed during a snow storm. We had waited so long that we dared not wait longer, so in they went, making the house damp and chilly, and so it seemed to stay, damp and chilly, the whole winter long. *Perhaps*, the manure heaps contributed to keep them damp during the entire spring also. Now, last fall we put our bees in the house on the 3rd of Nov., at least 2 weeks earlier than ever before; they were put away as "dry as a chip," for it was during a very dry time, and the weather was so warm that we feared the consequences, yet they seemed to go into that desirable dormant state at once, and as we were all taken up with the "forcing house" then, they were almost entirely "neglected (?)" until March 15th, yet strange to say, they seemed almost precisely as they were the day they were put away, and they made as fine progress as one could wish, until the April freeze.

Now then: a hive to winter should be so full of bees that if you turn up the quilt at any corner, say any day that is warm enough for them to be flying some, you will find bees all ready to rush out, and every comb should be so well covered that there is no possible chance for mold or dampness. You have perhaps all noticed how quickly a horse will dry off after having been out in the rain; if he is warm from being driven he fairly makes the water "steam," as it turns to vapor, well, a *strong* colony of bees will do the same thing; they will dry out a damp hive, or a set of damp, moldy combs, and in fact you may drench them with water, and they will very soon be all right again if you give them only half a chance, whereas a small colony could do nothing, but would remain damp and cold until they perished. If you find a colony when this reaches you, that has only a cluster in one side, the combs containing watery honey or looking blue and moldy, as they usually do when such a colony has been fed up in Oct., you may be pretty sure that they will get some disease during the spring or before, and that if you risk them thus you will lose the sugar you have fed, lose your time, lose your bees and Queen, and what is worst of all, lose your ambition and may be, your self-respect. The remedy is to unite them until they are dry and "sassy," and able to drive out not only moth millers, ants, and all insect enemies, but also dampness and the wintering malady as well. For directions for wintering, see Nov. number of last year. A colony to be fit to

winter should have bees clear up against the sides of the hive, all up against the quilt, everything waxed up tight, and covered with propolis, etc., etc. If you will examine a powerful colony, and then one of these puny ones, carefully noting the difference in the internal aspect of affairs, you will get at our meaning; even should you succeed in wintering the weak ones, they are so much of a task and bother, that a dozen of them will hardly give the profit of one powerful colony. To illustrate: on page 74 we mention having given a weak colony 3 combs of brood and bees from a strong one, and as it saved them we thought we had done a fine thing. Well, the shock on the strong colony before it was ready to bear it, was so heavy, that it was almost ruined, so far as honey was concerned, for the season, and the one that was helped was no better. Do you not see that it would have been policy to let the weak one die, *even in the middle of May*? We have very little fear that our fellow "*novices*" will any of them have their colonies too strong.

Where bees are wintered in a frost proof repository, we really cannot think it is worth while to bother about the matter of ventilation. If they had enough on their summer stands, they will certainly have plenty in winter. We would have the house or cellar so ventilated that the air is at no time unpleasant to breathe. Cellars in a clay soil, are apt to be damp; the plan given in Oct. No. of last year, we think the best remedy for this. For out-door wintering, we would use the straw mats, or the plan given by Mr. Townley; in regard to the straw packing, we think we would prefer to admit the sun to the front of the hive occasionally, as some one during our recent trip told us they had been doing successfully, yet colonies such as we have tried to describe, we think would winter safely almost any way. We shall pack our Quinby hive in the way Mr. Townley suggests, as an experiment, and will try and do it to-day, yet as Mr. Q. and his neighbors seem to have mostly abandoned the plan of out-door packing, we cannot feel a great amount of faith in it. Does not the house Apiary embody the same principle friend T., and at an immense saving of time and annoyance?

CALIFORNIA.

BY OUR OLD FRIEND AMATEUR.

DEAR NOVICE:—I think that you and I commenced bee-keeping about the same time. I was *very* enthusiastic and quite successful from the first, until several bad seasons in succession took away all profits of the business, and thereby cooled my enthusiasm. However I conceived the idea that I could do well with bees in Southern California. I left my native home in the Mississippi valley and came here. I used to read *all* your articles in the *A. B. J.*, and it was not long after you commenced writing for that journal, that I constituted myself one of your most envious rivals, in practice I mean; although I used to do a good deal of theorizing in the journals too, but have long since, laid that aside. Many hints have I received from your articles, and *always* adopted them but have done away with all, I believe except the idea I got from reading your first description of extractors. I still hold to that, with some improvements which you will notice in my description in Sept. No. of *A. B. J.* The hive I am now using, I commenced with five years ago, and it is more simple and cheaper than your "simplicity." I have also read your "GLEANINGS." Like it very well, but

think there is rather too much "Novice" and not enough "*gleanings*."

What I was going to say was about the rivalry I instituted against you without your knowledge. I always wanted to beat you in the bee business *practically* and now I have done it and come to boast over you a little. In the first place, I have handled more bees and taken more honey in one season than you ever did. Secondly I have taken more honey per hive all things considered, than you ever did, and probably more without considering condition, time etc. Did you ever exceed 141½ lbs. per hive on an average throughout your entire apiary—weak and strong? Thirdly, I have taken more honey in one day without an assistant, than you ever did. And I would like to know *who* has beaten 1170 lbs. Fourthly, I have beaten you on the arrangement of honey house and apiary. Now as I have "*tooted my horn*" maybe I had as well stop; but no, I guess I had better tell just what I have done and how I did it.

Well first, I commenced here the 5th of last May with 144 swarms in old box and Harbison hives, many of them new swarms. As the swarming season here is in March and April you can imagine how much of the season had passed before the 5th of May. After that time I had to send to Los Angeles and have material cut for my hives, etc., so that I did not get through transferring before the first of June. Oh yes! I should have said that I have transferred more bees in less time than you or any other man. I transferred in one day with one assistant *twenty-five* colonies from box to movable comb hives. Well, I have increased from these 144 hives to 305 and have taken 20,375 lbs. honey. I expected to have reached 30,000 but calculated too much on honey dew this fall. However there are four or five thousand lbs. in hives now that I will take out. So you see I have taken on an average 141½ lbs. per hive throughout the whole apiary, and I assure you that many of them were in any thing but good condition when they were transferred. Thirdly, as I stated, I have taken in one day—without an assistant 1170 lbs. honey, and with an assistant 1800 lbs. Fourthly, my apiary is arranged on a smooth piece of ground constituting a bench about 12 feet above the land below. The bee house—or honey house—is built on the edge of this bench—or in the bank so that we go from the ground of apiary into the second story of building, where are the extractor, stove for heating water, a small tank holding 75 gallons, etc. In the lower story are kept the carpenter's tools, bench, etc., the large tank, framed in one corner of building stout and strong, boarded up and lined well with zinc. This tank holds about 1000 gallons, is in south-east corner of building and is exposed to the sun by window on south side of upper story. It is covered with fine wire gauze, and is protected by a partition in the upper story, from dust, dirt, etc. The honey is first put into the small tank where it stands until the trash that naturally gets into it when extracting, all rises to the top, when it is well skimmed and honey drawn off into the large tank below. The object of the gauze cover and exposure of the large tank is to evaporate the honey thoroughly before putting up for market. The honey is drawn from the large tank into cans, barrels, etc., for market. The arrangement of the apiary is in parallel rows 8 feet apart, with hives 6 feet apart in rows, 50 in a row, 25 each side of the door to honey house. My intention is to have an arbor of grape vines for each double row of hives, the rows of posts for trellis 8 feet apart, and vines 6 feet apart in each row and each double row—or each arbor to be 10 feet apart. The rows running north and south, and hives setting just under the edge of arbor with openings outward, or, the hives on the east side opening to the east, and those on the west opening to the west. Then I can go under the arbor and between the rows of hives and be behind each while I work with it. This I like better than your arrangement, for I am always under shade and away from the bees.

I have this season had a temporary shed made by throwing brush overhead, but I intend that the vines shall take the place of the brush. My intention is to provide for 500 swarms, this you see will take 5 double rows with 100 hives in each, or 50 hives in each arbor on each side of the avenue leading to the door of honey house. Thus you see I have an apiary of 500 hives in a space of 300x300 feet. The apiary being on higher ground than the front part of lower room of building, I am not troubled by the bees in driving a team up to the door to load and unload. If you had a big lot of bees and honey to handle, you would readily perceive the advantages I have over your arrangements. My intention is to keep not over 500 colonies in one place.

Although I have beaten you so badly this season, I expect to go far ahead of this year's results next season. This has been a very poor season, *they say*, and

I suppose it has been much worse than usual, but I will be satisfied if they all average with this. I have a little idea in my head, "which, pardon me, I don't mean to tell," by which I expect to go far ahead of anything I have ever done with bees. But I will wait until another season is over before I tell it, and if Amateur makes more honey per colony next year than any other man in the United States—well, what then? And Mr. Novice, this is *exactly what I intend to do*. I will commence the season next year with 200 colonies (as the bees I handled this year were not all my own). We don't make any calculation on wintering, as bees gather honey the year round. In the valleys bees do better in winter and early spring. Bees do not gather propolis here in the mountains at all, but in the valley they gather as much as with you. We have but few scientific bee-men here. I have created quite a sensation this season, but will cause them to open their eyes another year.

I should have said that I intend trying one of your "lump nurseries" next season, as I have never tried it. I think the idea a good one.

Can you suggest any plan by which we Californians can realize more than 10 cents per lb. for our nice sage honey? It is better than the white clover honey of the east, and it is a shame that we don't get more than 10 cents for it. Our second rate honey is about like the golden rod or smart weed honey of the east, and we get 7 cents for it. I have now about 12000 lbs. of nice honey that I would take 12½ cts for, and deliver at depot.

Anaheim, Los Angeles Co., Cal., Sept. 19th, '75.

Many thanks, friend Amateur, and we are especially glad that you had the frankness to say what none of the rest of our friends have; viz., that *we* are talking too much. We think you are right, yet in the face of it must say that we did in '70 get over 150 lbs. to the colony, but we fear we shall never do it again.

If you arrange your hives hexagonally, using the same plan you have, you will have the same amount of room between them, and get them much nearer the house; also, do you not lose much labor by not having your house in the centre of the Apiary? Why does not the house Apiary accomplish all this much more effectually? We do feel sorry many times when we think of the many things we have advised in time past that have never been of any practical use, but are you sure you have wisely laid aside all except the extractor idea?

Should we remove to California, or even to Michigan, we feel sure we might make much more money than we do here, but should we stand as good a chance of making GLEANINGS useful to the great mass of our readers? in fact is it not better for us to have rather a poor locality so that we may see the worst features of the occupation?

PREPARING FOR WINTER.

THE following is from an article that the *Country Gentleman* of Oct. 7th, credits to the *London Agricultural Gazette*. It so nearly accords with our views that we give it a hearty endorsement. Of course the author is considering for winter, not for brood rearing. A good strong colony that has ceased brood rearing and gone to sleep by the first of Oct., we think all the better for it, and are much inclined to think as Mr. Quinby suggested, that they would be all the better if they could be kept sleeping until April 1st. If you want a few to "play with," during the warm days of Nov. and March, all right, but it won't pay to tinker with colonies that you value, in that way.

We know that rapid feeding or a large quantity of food administered at one time, is deemed most unwise

by some bee-keepers, on the ground that the bees put the food into the brood cells, and thereby prevent oviposition and the "consequent production of the all-important young bees so positively essential to the existence of a colony during winter." But this evil, if it be one, is more than counterbalanced by the benefit arising from having the food stored, its watery particles evaporated, and the whole sealed over before the advent of cold weather.

When feeding is protracted till the temperature falls, many cells that should be closed are left open, the aid which a warm atmosphere gives in promoting evaporation is lost, and candying of the syrup or internal moisture, which is very hurtful, follows. Besides, late breeding is not desirable, for in hives that have had a successful summer and are left undisturbed we find it is the exception and not the rule. Bees naturally go into a state of repose at the end of the honey harvest, and hence, by completing the work of feeding as early as possible, we allow them to get sooner into that inactive condition, which is not only beneficial to them, but preparatory and essential to enable them to meet with impunity the severities of winter. A bee at rest, and scarcely consuming any food, will live three times as long as one that is always moving and frequently on the wing.

Age, therefore, does not greatly affect colonies that spend their time hanging in motionless clusters, and their powers are but little impaired. If they go to roost before the close of September, and continue quiescent afterwards, they can do very well without any addition to their numbers from brood till the following spring. In proof of this, we may refer to two adjacent hives that were last year crammed with honey, and, for want of room, gave up breeding early in September.

From one of these, in order to make its Queen resume ovipositing, and get young bees, that are deemed so "essential," we, by means of the "slinger," extracted all the honey from two of the central combs. As expected, the emptied cells were soon filled with eggs, and numbers of young brood were hatched out before winter.

But with a view to obtain and compare results, we allowed the loaded nurseries of the other hive to remain as we found them, and its bees to relapse into their former dormancy. Both hives passed through winter satisfactorily; the one, however, which had only old bees to begin the campaign, quite outstripped its fellow that had a population of both old and young, and was ready to swarm a fortnight sooner. While, therefore, it may be true that autumn or late-bred bees are essential to the welfare of stocks which have their activity prolonged by dribble or interval feeding, it is no less true that stocks which are quickly fed up and then left to enjoy that autumnal repose which they naturally seek, have no need of them.

In spring small doses of food given over an extended period of time stimulate oviposition, and hasten a hive's progress; but we deprecate the production of brood in a hive after the normal period for it has passed.

Our counsel for autumn feeding is—give early, rapidly and abundantly.

Not a season passes but we have more or less who have entirely neglected feeding until about the 1st of Nov., and then ask what they shall do. Judging from our own experience, we should say, you will probably lose your bees anyway unless you can procure combs of sealed stores to give them. If their hives will hold the bees, the next best thing will be to unite them until they will hold no more; *perhaps* candy will now help them through, but as yet we have no record of recent positive experiments on the matter. We have one neighbor, Mr. John White, of Chatham Centre, this Co., who feeds late with the tea-kettle feeder and has good success, but his bees are very strong indeed, and as soon as they are fed he puts them into a very dry cellar made in a gravelly side hill. While he succeeds, we have innumerable reports from others who fail in trying to do apparently the same thing.

Well ripened sealed honey in dry, clean combs, we believe is *generally* wholesome for the bees, and sugar syrup under the same circumstances, *always*.

LINDEN ORCHARDS.

DEAR NOVICE:—It is too bad to throw cold water on any of your bright anticipations, but I am moved to undertake the thankless task. You are building upon the prospect of a speedy yield from your basswood orchard from the fact that there were a few blossoms this year. Now any old horticulturist will tell you that among a large number of trees there will an occasional one blossom, and perhaps fruit quite young, and yet the majority show no signs of bloom for several years. In a pear orchard of 250 trees I had one blossom two years ago, and the two succeeding summers not a blossom. Another bore fruit last year and this year, but no other tree has borne. The probability is that some local cause has acted to hasten maturity in the few trees which bloomed. If you will go out this week and dig a circle around one of your young basswoods, and cut off all the roots with a sharp spade, not near enough of course to destroy the tree, you will be likely to find blossoms on that tree next year.

If your orchard is planted close, as I think it is, with a view of thinning out as the trees grow, you can make a practical use of this knowledge, as is sometimes done with large commercial fruit orchards. Suppose the trees are planted thus:

```

o   o   o   o   o   o
i   o   i   o   i   o
o   o   o   o   o   o
i   o   i   o   i   o
o   o   o   o   o   o
i   o   i   o   i   o

```

with the view of eventually thinning out all the o's and leaving only the i's standing. The o's can have their growth checked by root pruning and be thus thrown into bearing sooner than they otherwise would, whilst the i's are growing and getting ready to occupy the ground. This root pruning can be done most cheaply by running a sharp plow along the row throwing a couple of furrows from the trees and then running the plow in the bottom of the last furrow next the trees. By taking every other row in this way both north and south, and east and west, you will see that all the trees but the i's will be root pruned. Now I don't say that I ever saw a basswood orchard treated in this way, but I know it works with apple trees, and I *think* it would with basswood.

The two swarms I got from Adam Griam have not had a very fair chance, but have shown themselves good stock. One young swarm made from one of them, having raised its own Queen and being supplied with empty comb and some brood, filled a two story hive and sent out a swarm. So a young Queen is no preventive of swarming with that breed of bees.

The "Novice" honey knife works very nicely and saves time where there is a large flat surface to uncap.

An unusual amount of buckwheat in my locality has made my bees rather wild on the swarming question, so in spite of me I now have 40 colonies.

B. LINDERER, Chicago, Ill., Aug. 18th, '75.

Very likely you are right, friend "L," for we *did* employ a man to spade around the trees a year ago last spring, and he did it so well that he actually *killed* one of them.

As the principal part of our linden honey comes from the vicinity of our plantation, we have good reasons for starting a house Apiary there, even before it is in bloom. Our trees were planted with a view of thinning out as you suggest, but they are planted hexagonally, like the hives in the plan of the Apiary as given on page 25, Vol. 1.; this arrangement occupies all the space to much better advantage than planting them in squares.

OUR OWN APIARY.

OCT. 4th.—The yellow C. sugar, fed in the open air, works beautifully so far as keeping robbers employed, is concerned. It is a great relief indeed to be able to work right

along without smoke when preparing them for winter. The dry sugar seems to work precisely as does meal feeding; they hum as merrily over it as if it were clover blossoms, and are so intent on it that they will hover over it when a handful is held out to them with as peaceful a hum as one might wish to hear, but if a single cupful of water be sprinkled on it, the tune is changed at once, and robbers pour in from all sides in an incredibly short space of time, indicating by the raised note that peaceful industry is at an end; the fierce passion for rapid accumulation of gains, it may be at the expense of the downfall and sometimes even the death of their fellows, is strikingly human, and affords a fair illustration of the depravity that results from making riches the sole end and aim in life.

Although we keep the sugar covered, the dampness occasioned by the night air is sufficient to start the robbing note, and even a single spoonful of honey will, after they have once been started, cause such a commotion that many bees will be killed in trying to get into other hives. In the house Apiary we have the feeders placed next the wall, and all we have to do in feeding is to go around with our coffee-pot—no covers or anything of the kind in the way. Well, we have once or twice incantiously left the door open, and the robbers evidently consider this house Apiary a "mine of sweetness," by the way they now attempt to crowd in, and try to force a way through those same "anger-holes," when any robbing is afoot.

The very best workers we have had this season and last, have been the hybrids from the daughters of our imported Queen. Every one of them has ample stores for winter without feeding, and yet they had so many bees that we divided them all about Sept. 1st. Now some of the new colonies reared Queens of their own as we have mentioned on page 124, and we had decided to kill these Queens and unite the stocks with others, but to-day on looking them over—these hybrids always have had a way of intimating that they did not require any of our assistance in their house-keeping affairs—we were astonished to find them large colonies of bees with abundant stores, and an amount of brood that was astonishing, and this at a time when we find hives full of bees of the old *yellow* stock that have not an ounce of honey. Now if we were to make a business of rearing Queens for sale, we should probably do wrong to keep such stock, but as we do not, but rather are trying to raise bees that will stand our winters, we shall keep such colonies as gather most honey, even if they are dark, and as cross as the Egyptians, when there is nothing for them to do.

Oct. 5th.—We have had several fine days since the frosts, and now the bees are abandoning the sugar and are bringing in loads of different colored pollen, particularly the dark green, which we think must be from the red clover, for we tasted it and it certainly is not *propolis* this time, any way.

We are *sure* now that bees can get pollen many times when they will not. Colonies having young late Queens are bringing it in briskly, while the old stocks are bringing none.

Oct. 18th.—A friend has just mentioned that he allowed a fine colony of Italians to starve in Feb. last. We advised him at the time to give them candy, and he bought a pound for them just in time to find them all dead. The point is that he gave the candy to another stock, and they left their sealed stores for it and ate the whole pound clean. As he simply laid the sticks across the frames under the quilt, it makes a very easy way of supplying colonies that are short of stores, but who can assure us that it will result in no injurious form of activity?

A bee-keeper living near Newport, Ky., had a brother in the vicinity of Moscow, Russia, who recently sent him several Queens. Through the kindness of some of our subscribers, a daughter of one of these imported Russians has been sent us.

About the 1st of Sept., as we took our usual promenade through the Apiary just before dinner, we discovered a very pretty Queen resting on one of the hives,—by the way, you can see this very hive in the fore-ground of the view of the house Apiary, which stands in the north-east corner of the enclosure shown in the Lithograph. We stooped down to enquire into the trouble of her ladyship, "poor thing!" one wing was a little defective, and we were engaged in tossing her up to test the matter, when Blue Eyes interrupted by singing out, "dinne's weady, papa!" and we hastily put her back into the hive to pacify the bees, turning the register on "not approved," until we could give them a better one. "Supposing we should find her laying, after all," thought we, as we were carrying them a Queen cell a few days after; and surely enough a fine lot of brood we found on looking, and stranger still, her bad wing had become perfect. Was this the case? Not at all; the Queen we put into the hive came from some other which must be queenless. This was so, and it proved to be in the house Apiary—we can run them over very quickly. As we looked the hive over, the peculiar hum of distress that almost invariably indicates Queenlessness was very marked, and as the Russian Queen reached us just at this time, we could not resist the temptation to try our skill in releasing fertile Queens at once. Accordingly the box was opened and the cover was presented to the bereaved colony to see if they were peaceably inclined toward the bees that adhered to it. Much to our surprise the first bee that touched the cover with its antennae uttered a peculiar note, and straightway every bee of the colony apparently, turned itself about and scampered in response to the call, at the same time joining in the note of rejoicing; this note is about the same that we hear when a cluster of young bees have just discovered their hive after having been shaken off the combs, and the consequence was that we soon had almost the entire colony hanging to the little board, for the simple reason that they were attracted by the scent of a fertile Queen. Of course we gave them the Queen when we found they wanted her so badly, and never did subjects behave with more commendable decorum, unless it were that their tokens of regard were a little too vehement, as Mrs. R., who was called to witness the curious sight, suggested. The Queen began lay-

ing at once, and on our return from the West we found an almost incredible amount of brood. Now it is our opinion that 3 Queens out of 4 might be let loose at once with safety, and to determine when it is safe, simply show the bees a piece of comb or wood that she has been crawling over, and see how they receive it. We have liberated many in a similar manner, and we firmly believe that many a Queen has starved in a cage, when had she been allowed to run among the bees, she would have been happily ovipositing. Now we know the danger of such advice, and therefore suggest that you first practice on a Queen of no value, and if you always keep your smoker in hand and your wits about you, you can put valuable Queens where you want them with almost perfect safety.

Caged Queens when not watched, are subject to many mishaps, see the following. Our cages always present food on both sides of the inmates.

I pressed the cage into the honey so the Queen would have food, but I opened the hive the third day to liberate her, and the bees had removed all of the honey out of her reach and she was dead. I learned a lesson; the lesson is, never trust black bees to feed a caged Queen, but put the feed in the cage secure from the bees. W. A. EDDY, Easton, Wis., Oct. 19, '75.

Problem 1. Have you solved it? (see page 18, of GLEANINGS, 1874). Has any one tried to winter bees by that? If your solution is satisfactory, then why use syrup? Why not have a two story hive to winter? the space between the stories will afford good passage for the bees? P. MOYER.

Sharpville, Pa., Sept. 13th, 1875.

Yes, we tried it in this way; we made some home-made candy and put it over the cluster, it soon got soft and sticky, and finally ran down on the bees and daubed them up in such a way that we never wanted to see any more candy, and we suppose they felt about as we did. The year we had the manure heaps we made some better candy, but they died in spite of it—the candy didn't kill 'em,—we ain't going to tell why they died. Well, we went visiting two weeks—when we got home, our feeding was rather behind,—about the 13th of Oct., we were so fearful that they would not get it nicely sealed that we stopped feeding—sent one barrel of A sugar to the confectioner's, and he has promised to make it all into nice, hard candy, for \$5.00—any sized or shaped sticks that we wish. Now you see we are going to give several good, strong colonies about half their rations in candy laid under the quilt on the frames.

P. S.—Confidentially—we are going to keep that barrel of candy in the barn.

We think the two story plan would be tip-top, and when we get a colony too large to get into one story, we will try that too. We made holes in the combs of about half of our stocks last fall, but could see no difference, they all wintered equally well—put in bees enough and they can go over the top and under the bottom of the combs.

Oct. 2nd.—The candy is made, and we have just been putting the house Apiary in winter trim. All unoccupied combs are removed and piled up where they will be handy next spring, in 8. hives piled one on another in the centre of the room. We have been rather disappointed to find that our strong colonies when thus condensed, do not cover more than from 4 to 7

combs, yet when these are well filled with stores, we think the supply ample. Where there is any doubt in the matter we lay some sticks of candy on top of the frames under the quilt. The sticks are 10 in. by $\frac{1}{2}$, by $1\frac{1}{2}$. The bees do not save it for winter as we had been calculating, but are eating it up at a pretty good rate during this fine weather. We have given one colony nothing but empty combs and candy; as the candy is very hard and brittle, we cannot think it unwholesome, fed during any kind of weather. It costs us about 12 $\frac{1}{2}$ cents per lb., the sticks weigh about $\frac{1}{2}$ lb.

Nov. 27th. Have had some candy bricks made—3 lbs. each. You don't need any feeders of any kind, just lay them on the frames, cover them with the quilt, and it's all done; even if you should neglect to press down the quilt after they have eaten it, it will do no serious harm, and you can feed them thus during the coldest weather.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT.

EDITOR AND PROPRIETOR.

MEDINA, OHIO.

Terms: 75c. Per Annum.

[Including Postage.]

For Club Rates see Last Page.

MEDINA, NOV. 1, 1875.

BLESSED are they which are persecuted for righteousness' sake: for theirs is the kingdom of heaven. Mat. v., 10.

A. B. J., and Magazine on hand in good time, but no World as yet.

WE can furnish the comb foundations at the prices advertised by Mr. Long.

EVEN if we get only 25 lbs. per colony, and have to sell it for 10 cents per lb., we can still afford to keep bees. Eh?

WE will send GLEANINGS 3 months for a copy of the Jan. No. for 1875; or we will send all of this year except the Jan. No., for 50 cents.

SAMUEL T. RAMSEY, 1515 Vine St., Philadelphia, Pa., tenders his services to those who are disposed to exhibit at the Centennial.

At the prices at which Mr. Harbison offers bees in his advertisement in this No., we should think it cheaper to buy them there than to move them as friend Witkin is doing.

DON'T confine the bees to their hives; if they get out it is probably because your cellar or house admits light somewhere. If nothing is visible, in any corner, after you have remained in it 10 minutes, it is probably dark.

THE Chinese Mustard in Vick's catalogue, at 50 cts. per lb., is quite unlike that of our importation; while the former has a narrow, irregular leaf, the latter has a broad, symmetrical one. It is now in bloom, and the Italians may be seen on it every pleasant day.

WE are glad to learn that A. Gray & Co., did send the extractor mentioned in our last, and if they, or Mr. Gray rather, proposes to make satisfactory arrangements in regard to all the money that has been sent him, we shall take pleasure in so stating it.

KIDDER'S *Secrets of Bee-keeping*, price 60c, for sale by the *Pacific Farmer Co.*, is in some respects a valuable work, but besides being behind the times—1868—

it also urges its readers to invest in rights to his patent hive, and worse than all, indulges in bitter personalities, which are bad enough in a Journal, but when they get into a book, are bad indeed.

WE have been much pleased by a perusal of *Bees and Bee-keeping*, by W. C. Harbison, published in '60; and if the work is now to be procured, we should very much like to add it to our list. Mr. H. treats largely of bee-keeping in California, and is the only author, it seems to us, who has ever given the subject of feeding during a scarcity of natural supplies, the importance it demands. We wonder that the book has not had a more general sale. We emphatically endorse all he says about keeping bees in a flourishing condition throughout the warm season, by sugar feeding whenever they are gathering nothing, and in regard to regular feeding invariably stirring them to the fields for pollen, when they would not otherwise "stir a peg." If you cannot afford to buy the sugar, sell half your bees and make the other half good. Feed whenever they are consuming more than they gather.

Michigan Bee-Keepers' Association.

The eighth Annual Meeting of the Michigan Bee-Keepers' Association will be held in Kalamazoo, Michigan, December 1st and 2d, 1875. The first session will convene at one o'clock P. M., Wednesday. Papers of scientific and practical value have been promised by many of our ablest and most experienced apiculturists; while the discussions are expected to be even more valuable than those of the previous annual meetings. The reputation of this society as being one of the oldest and ablest of the kind in the country, together with the proverbial hospitality of the people of Kalamazoo, should be ample inducement for all who take an interest in scientific bee-culture. We scarcely need to add that a cordial invitation is extended to all, and that every effort will be made to make the coming session a grand success.

HERBERT A. BURCH,

SOUTH HAVEN, MICH.

Secretary.

FRIEND NOVICE:—We like your intimation that bee-keepers had better move slowly in adopting the plan of wintering bees in boxes; in fact it we should presume to give advice it would be to go slowly in adopting anything that is to them new, (take patent hives as an illustration) no matter how well it may have been tried or how strongly recommended by others. Years ago we were aware that the plan had been tried and laid aside by much older and more experienced bee men. We have been led more by circumstances than otherwise into the plan of wintering bees as previously described, and have so far been successful beyond our expectations; and yet, if we had now a room or cellar that was in every way suitable to winter bees in, one that was affected but little by sudden changes in the weather outside, and one that we could keep dry through the winter, we should certainly put our bees there; but, mind you, we should first pack them in the boxes as soon as possible after the honey season was over, leave them on their summer stands until the commencement of winter, when they would be put in the wintering house, box and all; and when set out in the spring we should leave them all snugly packed in the boxes until fruit blossoms, and any weak stocks would be left there till June.

If desired, we will, in some future No., give our experience in wintering bees in boxes during the four winters, (three of them the hardest for bees we ever knew), in detail, showing just how we have been gradually led into it and how far we have been successful. J. H. TOWNLEY.

Tompkins, Mich., Oct. 12th, 75.

Honey Column.

YOU may put me down in Honey Column as having 3 barrels of honey for sale. Two barrels nice and white, which I offer for 15 cts. per lb. delivered here, and one barrel dark, at 10 cts. per lb. packages free.

Knowersville, N. Y., Oct. 11th, 75.

I have 2000 lbs. nice extracted honey, (mostly basswood, in barrels and kegs), for which I want 16 cts. per lb. I commenced last spring with 15 swarms, bought one Queen and now have 60 strong stocks with lots of honey for winter. Have taken a surplus of 2500 lbs. O. H. TOWNSEND, Hubbardston, Mich., Oct. 4th, 75.

OUR HOMES.

BY A. L. ROOT.

INTRODUCTORY.

This will look a little bit eccentric, dear friends, I fear, and for fear you may think I am getting out of my proper domain, or that I am going to trespass on your good nature with some of my new notions, I shall make haste to assure you that this and the next leaf are not really a part of GLEANINGS; they are thrown in as it were—do not cost you anything, and very likely will not be worth anything, at any rate you are to be judge and jury. May I ask you, in any event to please be lenient? The work will cost me considerable time as well as money, and—now really I don't know whether to say I am fortunate or unfortunate, in having little to spare of either. Do you not sometimes think it a misfortune for a person to have been born wealthy? Have not the great majority of our really useful people of either sex, had their powers developed by stern necessity? Now perhaps I can get started best by telling what I intend trying to do in a sort of

PREFACE.

During Mr. Langstroth's visit last spring, we had as you know, many very long talks; and he was in the habit of pretty severely criticising some of my work about the Apiary, perhaps to draw out my reasons, etc., and at one time he asked me if I thought the bees would gather any more honey for having their hives arranged hexagonally, in the form of the cells of the honey combs, etc. Of course I replied that I did not, and then I tried to explain how I had studied to arrange it all to save the time of the apiarist, that when we began to count our hives by the hundred, every unnecessary motion was a decided expense, and that in the present age, time, as well as *honey*, was money and that it was as good economy to endeavor to save the one, as the other. To illustrate, I spoke of the way in which many homes were arranged, how the patient house-keeper was often obliged to go several rods in one direction for fuel, and perhaps nearly as far in another for water, very likely lifting both up inconvenient steps, having unhandy cellars, pantries, etc., etc., and so on without end. "Now," said I to Mr. L., "ought we not to be very careful, that we who have taken upon ourselves the responsibility

of teachers, set a good example before our pupils, and try not to fall into the errors mentioned above, in the arrangement of our Apiaries, honey houses, etc.?"—I wish I could repeat exactly his reply; it was to the effect that he who should revolutionize the kitchens, pantries, cellars, woodpiles, wells, etc., etc. of our land, and in short make it a study to shorten, simplify and classify woman's work, would be more of a benefactor to our nation than—than—well, really, I cannot remember what he did say, but at all events he wound up by declaring that your humble servant was equal to, at least making an attempt in that direction. The result is, that here he sits—with a Type-writer and lots of blank paper—lots of good will toward you all, health and energy, but with far too little general knowledge of humanity, and perhaps a lack of discretion in properly directing what little he has. Do you remember our text of last month in regard to what is said about being faithful with the few talents that God has given us?

CHAPTER I.

"Be it ever so humble, there's no place like home."

IF I should ask you if you knew of homes that were not pleasant, you would doubtless say you did, that you knew of many, and should I further ask why they were so, you would perhaps proceed to detail very volubly just how so and so do not do as they should. This may be all very well, if in detailing the circumstances we see their errors in a way that will enable us to avoid falling into the same, or similar ones. Is your home a happy one? Is it so pleasant that you prefer to spend an evening there to any other place? Of course I do not know to whom I am talking, nor of the varied circumstances by which you are surrounded, yet I feel that there is a broad field for earnest work, in almost every household. Now before I go farther, I really feel that I must go over at length, in fact at considerable length, a subject that may be considered impertinent or perhaps intrusive, by some of our readers. If we were going to build a honey house we should first need a good foundation, and as many barrels of honey are very heavy, we should need an extremely good foundation. It is just so with our homes; a nice pump right in the kitchen close by the stove, would be a pretty "heavy" expense, and to advise everybody to get one,—if I were so fortunate as to secure attention,—might make a domestic "jar," or at least result in a downright refusal to entertain any proposal resulting in any such extravagance, whereas my real purpose is to consider how the expenses of this model home may be lessened, and not increased. The principal idea is to get every member of the household to help, to enlist their hearty co-operation, not only the children—clear down to the baby, but in a certain way the cat and dog also, and in short every bit of animated nature about the premises. I am not

speaking of imaginary things, I assure you, for there is one home that I have recently visited, from which I shall have to draw largely, before I get through, and I earnestly hope I may be able to show you the spirit of it, if nothing more. When I say that the first stone of the foundation of all our work is to be the most perfect good nature on all sides, many of you may say that your homes possess it already, because you never have any downright quarrels. This is all very good, but is not sufficient for the foundation *we* want. To illustrate:

I passed a couple of days in a very pleasant family, recently, and had been talking on this same point. Husband, wife, and four pretty, well behaved children, seemed to constitute almost a model household. Well, on Sabbath afternoon, I—it may be *too* earnestly—urged that we should attend a Bible class, in charge of a lady who was doing a great work of reformation in their town. The husband kindly offered to stay and take charge of their four months old little one, and the consequence was that almost before we knew it, two hours had passed. As we neared their home, our animated talk in regard to what we had witnessed, was interrupted by cries of the baby which evidently touched the mother's heart at once.

"Why my dear husband! how long has baby been crying in this way?"

"She commenced shortly after you left."

"And you have allowed her to cry all this time?"

"How could I help it? I did everything I could think of; didn't expect you would stay so *very* long."

"I declare! this is always just the way if I go out and leave you with the baby."

That was all; it was only a very little thing but both looked pained and unhappy. This wore off after a time, and both were as pleasant as usual; perfectly right, perhaps you will say, such *little* things are not worth taking up and noticing again, but I cannot feel that it is right. It seems to me that husbands and wives—I would like to say, or anybody else, but they don't care so much for each other, and are not so easily touched,—should never speak to each other in this way, or at least if they do, they should acknowledge their error as soon as their stubborn natures will come into subjection. If you are tempted to think this all trifling, remember who it is that has said, "he that ruleth himself is greater than he that taketh a city." In the evening before retiring I ventured to suggest that the speech was hardly a kind one, and I recalled it to mind.

"But it is the truth: it *is* just the way when I leave him with the baby!"

Every time I repeat the little circumstance in the presence of mothers, they seem with one accord to agree that she was nearly if not quite, justified in speaking as she did. Now perhaps I had better take care that I do not become dictatorial, or get into argument, for argument so often results only in strengthening both parties in error, that I earnestly hope I may avoid it. I also would avoid any lingering disposition to excuse my own sex. Granting that he had been very heartless in allowing the baby to cry nearly two hours,

what was the very best thing to do under the circumstances? or rather, what is best to do under all circumstances where we are likely to feel the least disposition to tell people wherein they have been wrong while we have been right, and to go even further, any disposition to complain of anybody or anything in a fretful, faultfinding way, *whatever* the provocation may have been? Is it not possible to have such perfect command over ourselves that instead of feeling the slightest disposition to retaliate, we can coolly consider how best any bad matter may be remedied, and at the same time make the author of the mischief a better man or woman, as the case may be? A great part of the world prides itself on remembering a favor, and on being fair and liberal with those who have shown a similar spirit, but in our model household we wish each member to emphatically bear in mind the glorious doctrine of returning good for evil, and that a blessing follows from applying it, in the most trivial actions as well as the greater affairs of life. In regard to the baby I would suggest that as soon as the state of affairs was seen, the mother should at once assume all the blame, if any blame there was, and mildly apologise to the troubled husband for her protracted stay; this would have at once brought out his better self, even had he performed his duties indifferently; and by the way, in no manner can a parent so well show that he "ruleth himself," as by being at all times ready to take all the blame of any misunderstanding. Show that your shoulders are broad, and that you can bear to be blamed for that which you have not done, and above all things, do not fall into the cowardly habit of arguing over "whose fault it was," in the little things that *will* continually go wrong. Careful investigation of the case in question revealed the fact that the tube of the baby's nursing-bottle was of an inferior quality of rubber, and had become so softened by the milk as to cause the sides to adhere together, and so the "precious little darling" had perhaps tugged away at it until long after forbearance had ceased to be a virtue, and then it had simply vented its righteous indignation toward all modern innovations of whatever nature, that stood in the way of supplying even such a little speck of humanity with its needful nourishment. Its papa doubtless after having "interviewed" all the machinery to the best of his inexperienced judgment, concluded that it must be crying simply to have its mamma come home, a feeling in which he probably heartily joined at the time, and so both waited in—guess we'll say *impatience*, while the "long minutes" slowly dragged by. Had the makers of these rubber goods been faithful in little things, all this might have been avoided, and I confess we all indulged in some rather severe censures on the way things were made "only to sell," but in thinking of it since, I fear we did not do our duty. Manufacturers, jobbers, retailers, and business men generally, are fellow creatures, and are probably just as good, and just as conscientious as we are. Ask yourself—if when you are inclined to censure some one—you would do any better if you were in the same business or place. If you say you would, we must take it for granted that you are better

than people in general, and the conclusion is that we are all better than our neighbors. Ought we not to conclude that we are all only a fair average? I think it will be a much safer foundation for our work. After having had considerable experience in business with the jewelers of our land,—the trickiest set of men in the world, some may say,—I feel no hesitation in saying that our business men as a general thing, are very glad indeed to be told the faults of their wares, if it is only done in the proper spirit, especially those who have done a long and successful business. A person said to me a few days ago, in speaking of a brother in the church who is a jeweler,

"I will never enter his store again, he cheated me so abominably."

"Please don't say that, friend H., I really hope Mr. S. is a good christian, like yourself. Please tell me about it."

"Why he sold me these studs for solid gold."

"Well, are they not? they look nice."

"Oh yes; they wear bright, but see how they have blackened my linen shirt bosom."

The button holes were too large, and in slipping about they had marked the linen as with a lead pencil, and it was not until I had explained that even a gold coin would do the same, that I succeeded in convincing him that Mr. S. was honest, and even then he said he had become prejudiced against them and did not want to keep them. Is it not a sure indication that we are wrong whenever we, under any circumstances, feel like saying that we never want anything more to do with a fellow being? I feel very sure that the kindest thing you can do is to tell the dealer pleasantly just wherein his wares have disappointed his customers; he in turn can then tell the jobber in the same pleasant way where the mistakes are, and the jobber can talk over the matter with the manufacturer. Jobbers and manufacturers, and to a certain extent, dealers, seem to have discovered this great fundamental truth, and I have frequently known of their taking back damaged goods and smothering their indignation, in a way that was decidedly returning good for evil, even if the inspiring motive was only to avoid losing one, who was ordinarily a good customer. The consumer is really the one to decide how goods are to be made, and also has very much to say in regard to what prices shall be asked, but the whole matter can be, aye, and should be, conducted in the most friendly manner. Do not for an instant think of crowding your grocer or dry goods man "into a corner," for unless he is a much better Christian than yourself, he will surely retaliate, and then instead of having a friend to deal with you have in one sense an enemy. As quarrels are contagious in a neighborhood, so is peace making, and one peace maker may by force of example do more good in a community perhaps, than even the minister who occupies the pulpit on the Sabbath. Not that I would speak lightly of our sermons, but that they have been heard so often; many times actions will set people to thinking when talking will not stir them. Go help your minister in the way I have described.

Now tell your druggist that it is a bad thing to starve bees by having inefficient beekeepers, and a very serious thing—at your house

—to have machinery for the babies that is liable to cut off their rations; and pleasantly tell him that if he has none better he may get you a good one at the first opportunity. A few complaints like this, and the manufacturer will soon do differently, especially after he has had to take back an invoice or two because they were badly made.

CHAPTER II.

"A penny saved, is two pence earned."—*Franklin.*

I suppose you have all heard the matter of buying the various family supplies at wholesale talked over, thereby saving the profits that your grocer must, conscientiously, charge to give him a fair and honest profit. You have doubtless heard enumerated how you might save the profits that go to the "middle men," might save the time it takes to go round and do the marketing, save the time occupied in making change, save the wrapping paper, etc., etc.,—get rich in fact, from the "pennies saved," that now are wasted. This reasoning is all good and sound I believe, and in fact I believe that humanity in general, admits it; but notwithstanding, very few indeed have put in practice and carried out this great plan of saving both time and money. A few went into it vehemently, even went so far as to inform their grocer that they were going to stand his extortionate prices no longer, they could buy as cheaply as he, and the like; did the grocers break down? Surely not. They kept along quietly in the good old way, and bye and bye their old customers came back and traded, in the good old way, and like the thousand and one reforms that come up daily, things soon went back in the same old ruts, wasteful though they were. Perhaps I should say *pretty nearly* the same old ruts, for such excitements do usually tend to work a slow change for the better. I am trying to lubricate the wheels a little, and see if I cannot accelerate the slow change. The greatest trouble in this matter of buying supplies to last a whole year, is—I have been told,—with the other sex. If you put a barrel of sugar in the pantry it don't hold out, as when bought in 2 lb. packages as fast as wanted; there is "lots of it," and where is the need of "scrimping?" Everything will be sweetened up as it should be; the children can have a lamp, the baby a bigger one, and bless their dear generous hearts—babies and mothers too if you like—if there is a poor neighbor who has sugar neither by the pound or barrel, or one who never pays back when she borrows, from the store of plenty all are supplied until it is all out, and the hard working husband sees no other than the good old way of getting two pounds at a time, and keeping a constant check on extravagance, by grumbling every time he is told a supply is out. "Whatever have you done with so much sugar lately?" And he surveys a row of juvenile faces that, with the exception of the baby, deem it a duty to look guilty while enquiries are propounded as to what was done with the money he generously gave them a few days ago; and before you blame the poor man too much, let me suggest that he has learned by bitter experience that he *must* question clear down to the very last last ten cent scrip, as to where it

all went to. Where is the trouble? Trouble there is, for both parents look troubled and unhappy, the children look troubled, and perhaps the only glimpse of sunshine that is at this minute to be found in the household, comes from the baby. "Precious little darling!" she has confidence, perfect confidence in both papa and mamma, confidence in brothers and sisters, confidence in every body and every thing. Is not this confidence, this love and innocence, just what is wanted? To be sure these two parents love each other, but is there not danger of this love being covered up and forgotten in the mutual distrust that now seems to reign? He has no confidence in her ability to handle money judiciously, and she, feels indignant that he should seem to think it all *his* money. Have they not both worked for it? Has she not even worked *more* hours than he? Then why should it not be a partnership, why should he not tell her about his business as he would a friend of his own sex? Why should he not see that her hard and laborious life is all given toward one common object like his own, viz., a nice and pleasant home, and rearing their little family in such a way as to be good and useful citizens, if possible such as will be the pride of their country when they grow up?

It is an easy matter to tell how things are, to tell how they should be, and to tell what ought to be done; but is it not possible to make this woman careful, to cure this man of being stingy—I don't mean you dear reader; no, no, it is some one of your neighbors that you can think of—to make them mutually confide in and trust each other? I feel sure it can be done, with God's help I *know* it can be done; as greater things have been done in our dear little home, I feel sure they may be done in others. By bringing the proper forces to bear I feel as sure this woman can be induced to try to equal—nay, to excel her husband in economy, as that we can teach the blue eyed baby better, who is this minute pouring the blue whortleberry juice out of her sauce plate, all over her clean Sunday clothing that the ambitious mother has donned so as to have her all ready in time for church, and to win that proud smile from her papa when he sees her looking so like a very "pink of perfection." Do you wonder that the poor mother feels like giving up in despair, and just having a "big cry?" Can't babies be taught? Just you try them on some piece of mischief and see. "And am I to be taught like a baby?" says the indignant mother through her tears. "Except ye become as little children, etc." Oh! that we might consent to be as little children so far as touching our pride, is concerned, and that we might become humble enough to admit we are in the wrong, and thus get into a position capable of becoming higher, stronger, and nobler. Will you help? very well; we will commence with the baby. Tell her just what she has done, and how sorry mamma is that she has spoiled all her clean clothes, that poor mamma gets awful tired, etc., but make your sermons short and brief, for babies, and sometimes older people, cannot stand *long* sermons. Now tell the children you will show them a trick; place two clean tea-cups on a clean sheet of paper, fill one to the brim with water, and ask

if any one of the children can get the water all into the other cup without even so much as wetting the clean paper. When they get to work with their spoons, the baby will want to try it too. Give her two sauce plates and some water and tell her to be very careful not to spoil mamma's table cloth; when they can manipulate water carefully give them sauce or honey, bye and bye spill some honey on the bare table, and offer a premium to the one who will clean it all up quickest and neatest, always giving the baby a task equal to her ability. Now in your capacity of teacher you should be as careful about using an unkind word, or using the least bit of censure for awkwardness, as you would be in carrying a shovel of coals through a room where gunpowder was knee deep. You can wind up by telling them that mamma has ever so much hard work to do, and that all are going to help make it easier. Baby can be taught to pick up, and hang up things in their places—one of our little ones learned this so well that he would hang up every thing, even down to the shoes and stockings if they were left in his sight, and I verily believe he would have hung up the cups and saucers if he could have tied strings to them—the older ones can put in fuel, clear up every splinter and bit of litter, and the father can set an example for the rest of the household by cleaning his boots with the most scrupulous exactness before coming into the house, etc., etc., and really making it a business to help in every way, both by precept and example. Dare you urge that this takes too much time and is too much bother? Can you fail to see that this plan followed out, would give you a force of workers, cheerful and faithful ones, on the farm, in the garden, the fields, the barns, nay, in the store, the counting house, in our schools and even churches, of a kind that money cannot purchase; a kind of help that is more to be valued than pure gold? More than all, you are at the same time giving your children a part of their education that none but a parent can well give, and one that lies at the very foundation of a great and noble character. Are there ever children that cannot be interested in such duties? I think not if they are taken at an early age, and the parent is sufficiently interested in the work to devote to it all the energy that he does at times to other matters in life. Children can be taught to be neat and skilful, almost as easily as they can be taught mischief; and they can be taught to take pride in keeping their faces and clothing clean, being careful that they do not waste their food, being skilful in the use of their spoon, knife and fork, seeing that everything they have disarranged in their plays, be carefully put away, and so on almost without end. This too can be done in such a way as not to seem irksome to the dear little ones, by any clear, strong, faithful parent; one who perfectly "ruleth himself."

To be continued.

Now my dear friend if you are one of those people who like a bee-paper to be all bees and nothing else, all you have to do is to give these two leaves a twitch and they will come right out leaving nothing but GLEANINGS.

Reports Encouraging.

WE have increased from seven to thirteen, and taken off 400 lbs. box honey and about 40 lbs. frame. Our best stock gave 105½ lbs. We shall pack them in straw the last of November or in December, and not open them until the last of March. Will some one who is constantly experimenting, please try the straw? It is cheap and easy.

Wm. R. EDWARDS, Skaneateles, N. J.

I am a beginner. Started last spring with five stands and increased to nineteen. Have taken 700 lbs. of honey, nearly all in small caps.

R. A. CALVIN, Eau Clair, Mich., Sept. 30th, '75.

REPLY TO JAMES HEDDON.

PERMIT me to give on these pages my report for this season, at the same time to try to say something to console our much bereaved friend James Heddon; begging his pardon however, and assuring friend H. that we only wish to get at facts in a friendly way. Now friend H., I have six thousand dollars invested in farm property, 80 acres, the soil gravelly loam, once timbered with sugar maple, basswood and elm principally. It is in a good state of cultivation and I try to make it pay all I can in a money point of view without impoverishing the soil. I might also add, I am a farmer's son, have taken the *Am. Agriculturist* for years, am 35 years old, and weigh 175 lbs. Am hale and strong, yet withal I find farming a very slow way of making money. The proceeds from this farm for the past three years will not amount to \$100.00 annually after paying hired help, taxes, wintering stock, etc.

Now, for bees and bee culture I will take this season, it having been the poorest of all since I have been in the bee business. I sold 5 stocks in the spring at \$18.00 each, leaving me 75 to begin the season with; from these I have increased to 175, have sold 25 stocks at \$12.00 each, leaving me 150 stronger stocks than I ever before had ready for winter quarters. Have taken 8000 lbs. of extracted honey, 17 barrels or a little less than 6000 lbs. of which, I sold to Mr. Chas. F. Muth of Cincinnati, at 10 cts. per lb. Balance of extracted sold at home by the jar, jug and pailful. Have also sold 700 lbs. of comb honey in frames at 25 cts. per lb., and I have yet on hand about 200 lbs. of unfinished comb honey which I am selling at 20 cts. per lb.

I have a letter before me received from friend Heddon, in which he says, when Mr. Bingham succeeded in wintering his bees two years ago, about 60 in number, he got \$1500.00 worth of honey, all box; now does Mr. H. know this? I presume he does or he would never have written it. This theory being true, only think! of having \$2,000.00 buried up in this precarious pursuit. Indeed, friend H. I like to hear men grumble, but you suit me *too* well, I shall withhold my grumbling until I see how well I can do with 1000 swarms, if perchance I winter 'em.

H. M. HOOR, Carson City, Mich., Oct. 5th '75.

HOUSE APIARIES.

DEAR NOVICE:—I desire for my Apiary the severest criticism, and the most thorough practical tests, but it is desirable that they should be made in *good faith*, and with a view to the improvement of our "profession."

The "expensive ventilators" spoken of, if made of wood, would not cost more than two or three dollars, and the painted entrances not to exceed fifty cents. More expensive ones could be used, but they would be no better except for the looks. The house itself may be built of any form or dimensions, and any style of hive can be used in it, though I prefer the close-fitting frame without box, or the simplicity with some modifications. For common use and particularly for box honey, the form of the building should be rectangular, that form is more convenient, and *very much cheaper* than the octagon. When the extractor is to be used, and one chooses to add the extra expense, the rectangle and hexagon combined is most desirable.

A house 9x15 feet will accommodate fifty hives, and give ample space for eighty 1½ lb. surplus frames to each hive, and for handling the hives to advantage. Such a house, built according to my plans, will cost at least a third less than a building of the same dimensions built the usual way, and less than fifty good out-door hives.

As to my claims in the *A. B. J.*, being "*much too*

strong," I can only say that the matter is in the hands of the bee-keepers of the country, and I have no doubt they will decide it properly.

If its claims are sustained—as I have no doubt they will be—it will work an entire revolution in bee culture, and save millions of dollars every year, that are now wasted; and will also open up an avenue of healthful and remunerative employment to the ladies.

J. S. COE, Montclair, N. J., Oct. 12th, '75.

On the 5th of Oct., I visited Mr. Coe at Montclair, and saw his bee house. After returning home, I saw the article in *GLEANINGS*, on page 131, saying I had never seen his house, etc. I saw nothing about his house, that would lead me to suppose that bees would sting less, than in Faulkner's house. When you and Mr. Coe have made as many tons of box honey in the house apiary as I have, we will hear nothing more about bees not stinging in the bee house.

J. P. MOORE, Binghampton, N. Y.

Late in the season—about the middle of August—I bought two of Faulkner's patent bee houses, one containing 14 stands of Italian bees, the other 15 stands of same—they had gathered no honey this season, and had not been *fed* up to that time, and were consequently not in a very good condition. I was totally inexperienced, never having had any thing to do with bees, but commenced feeding them right away, first I fed syrup made from coffee sugar, but they did not lay up any honey, so I bought some buckwheat honey and am now feeding that. But my inexperience I fear will cause me to make some errors that will cost me my whole stock. What would you advise in my case?

J. A. SMITH, Hartwell, O., Oct. 19th, '75.

We would much prefer sugar syrup to your buckwheat honey. See page 69, this same item from friend Prentice will do for those who are so much in favor of the straw packing. They had buckwheat honey. Friend S. we would like to know about those house Apiaries before they came into your hands; have they ever been a success? It is *very* injudicious for beginners to invest in expensive patented fixtures.

I am in doubt about cutting a hole in the quilts and putting in wool. In working that bee house don't forget the small folks who have from one to a dozen hives. I winter in the cellar.

HANNAH W. WILLIAMS, Springville, Ia., Oct. 6, '75.

Send me if you please a little fuller description of "house Apiary." I like the plan and want to put up one like it. Do you make the floor double? how do you make air spaces in outside wall? How large should the ventilator be, from cellar, and above through roof? Do you have any ventilator from outside into cellar?

J. S. NOBLE, Akron, O., Oct. 18th, '75.

We would again earnestly advise that our friends be not hasty in deciding on house Apiaries; can you not wait until we have given it a test for a whole year?

Floor is not double, for we have a very close cellar under it; we do not have any ventilation from the cellar, chiefly because our soil is clay, and damp in cold weather; in fact we have no ventilators more than the 36 entrance holes, and we are very much inclined to think none else are needed. These entrances will be closed with wool or woollen cloth in very cold weather. Air spaces in the walls are made by separating the paper with strips of board—lath will do—thus making three dead air spaces. Each coating of paper we made as nearly air tight as we could, presuming that if the frost gets through the first two coatings it will rarely get through the third, and never, we hope, through the fourth. During a recent freeze many bees were killed by getting too far from the cluster in our out-door hives, but nothing of the kind has taken place in the house, and this one item, during spring and fall, will, we think, prove a great gain.

QUERIES, ETC.

WHAT are the advantages and disadvantages of frames without bottom bars? Have you tried thin pine guides an inch or more in width? Will the Queen lay in cells built on these wooden guides? P. MOYER.

Sharpsville, Pa., Oct. 6, '75.

Advantage proposed is to occupy with comb the space that is usually taken up by the bottom bar, but the frame is so insecure that we believe the plan has generally been dropped. The irregular bottom made by the bees, and the extra lumber required to make the frame strong are the objections. The Queen will not lay in the cells with wood bottoms, but they will be filled with honey. We think there is no advantage in having these guides over $\frac{1}{4}$ or $\frac{1}{2}$ inch in width.

How many sheets of Comb Foundations 6 by 16 are in a pound? Would it pay to invest largely? Bees did well this summer, had 11 in spring, have 26 now. Sold \$140.00 worth of honey. A. F. STAUFFER.

Sterling, Ills., Oct. 18th, '75.

About 10. Invest largely in nothing until you have tested it for yourself.

I have bought two stands to start with. Have had them 7 weeks; had one swarm about 3 weeks after I got them home, took 65 lbs. of honey from the young swarm and about the same amount from one old one. They were in common box hives and I had to drive them out of one hive into another. I would like your idea as to the best way of wintering. My bees are well protected, as I am surrounded on three sides by woods, and on the fourth are very high bluffs. I have thought of digging a cave in the bluff for wintering, but would like the opinion of some one acquainted with the matter. Am going to use the L. hive. Have just purchased one as a pattern, cost me \$3.00.

Yours respectfully, C. A. H. FISHER.

Kenebec, Ia., Aug. 17th, '75.

A cave if dry and frost-proof will be excellent.

I have started my carload of bees to California, and will start with 14 others to the coast to-morrow. R. WILKIN, Oskaloosa, Iowa. Oct. 22nd, '75

WITH OUR BEES.

CYLA, "if ever, come perfect days." said Cyula, pausing for one brief moment in the doorway, and looking across with longing eyes to the changing woods.

But a few years since, days like this—days when the sky was cloudless, and the sunshine soft and warm, and the maples were turning to scarlet and gold,—such days were sacred to long strolls in the woods for autumn leaves; and now I thoughtlessly exclaimed,

"We will take the whole day Cyula! It is too perfect for anything but the woods, and we may not have another like it."

And Cyula turned, and solemnly laying her hand on my shoulder, led me out among the bees, saying sternly,

"You will spend your perfect day here, my dear! We may not have another like it, you say, yet you think to entice me to the woods when not a single colony is prepared for winter!"

Then Cyula walked into the house for her bee-hat and the Quinby smoker, leaving me to my own reflections.

"O my pets!" I cried, with despair and affection in my heart; "didn't you stand between me and the woods last year? and shall it be the same this year?"

And so the day has passed with our bees, and I have only a wee bit of it for myself, now that the sun is low and the air is too cool for opening another hive. But after all, the day has been full of a delight that only a bee-keeper can understand; and not once have I tho't of the woods for whose glories I so longed in the morning. Only now, sitting by queen Maud's doorstep, do I look over with a half sigh to the changing maples and down to the dark pines. Maud's colony is one of our best beloved. Maud is Medina's eldest daughter, and Medina, we explain to our village friends, with much satisfaction, is the daughter of an

imported Queen. So bright and good are the bees of this colony! when others, Cleopatra's for instance, fiercely dispute at this season our right to interfere with their household affairs, Maud's subjects only buzz enquiringly around our heads.

"And within our heads!" suggests Cyula.

After speaking in praise of Maud's bees it is not pleasant to say anything to their discredit, and yet Cyula by that allusion compels me. But shall the wrong doing of one bee condemn the whole colony?

It chanced this afternoon as I was shaking the bees from a frame, that one crept unobserved beneath my veil, and before I could free my hands and give it an opportunity to return, it had rushed blindly into one of my ears. Then I confess I lost my composure and called wildly for help. It was not the sharp sting so much as the frantic efforts of the little creature to penetrate to the interior, that alarmed me. When, at last, its explorations ceased, and with Cyula's help it slowly came back to the light, I discovered what I had before been unconscious of—that another bee had left its sting on my throat.

"You say that Maud's bees are bright," pursues Cyula. "In what sense do you mean?"

"In each and every sense," I emphatically return.

"They showed their brightness last summer," she continued, "when they swarmed down to the woods and clung to a maple for two hours, leaving poor wingless Maud at home. And when, at last, they decided to return, they showed their superior brightness by circling half way round the clearing, entering the apiary from the opposite direction, and plunging into the first hive they came to. Do you remember that we were obliged to throw sheets over half the hives before they found and entered their own home? Bright bees they are indeed!"

I close my portfolio. "Are you aware, Cyula, that it was my intention to give a full account of this day's work? And if you had stayed in-doors, trying to make *nicely fitting quilts*, for the bees—?"

"Your article would have been too long for GLEANINGS," she interrupts. And then, as we go in, she adds,

"There are signs of rain in the east. If it be too stormy to work among the bees to-morrow, you shall go to the woods."

NELLIE LINSWICK.

"Our Clearing," October, 1875.

Thanks friend Nellie, and please do not imagine that articles like the above are in any danger of being found too long for GLEANINGS. Tell us all about how you prepared them for winter, and if we have so many letters from our lady apiarists that we cannot find room, we shall enlarge GLEANINGS, we assure you.

Bees frequently get into the ear by accident, but rarely with a purpose of stinging, yet so strong is the inclination to use the finger to get them out, on the impulse of the moment, that one is almost sure to get stung. This is a very good test of an apiarist's self command; if he or she can stand perfectly still—making no wry faces, but on the contrary looking pleasant "the while" a bee buzzes about and makes frantic efforts to turn round, making a roar meanwhile something like a cataract, we shall have to conclude that they have learned the great lesson of being master of themselves, even while imagination pictures the exquisite agony of one of these intensely pungent stings when planted in such a delicate organ. When handling bees during cool weather in the fall, a young bee will sometimes creep into the ear by mistake, and finding it a warm place innocently concludes to stay until something turns up indicating the whereabouts of his companions. In this case it must be made to get out without too severe pressure; perhaps the aid of some one else may be required. You might try screaming at the top of your voice, but beware how you administer injudicious pokes with your finger. Wear a veil? Well, yes if you *must* have one, but we really cannot help thinking you all ought to feel ashamed of the feeling that prompts its use.

Heads of Grain, FROM DIFFERENT FIELDS.

CAN I divide a large swarm of bees at this time of the year, and build them up for wintering, that is, get them to raise bees by feeding sugar syrup in September and October so that I will have two swarms having bees enough to winter well, as far as bees are concerned? I have 12 swarms. I lost all but one last spring, and that was Queenless in the spring. I bought 3 good swarms in May, in box hives; transferred them, and in June divided them. In July they were running over with bees, and all cast a swarm, all are now full of bees and honey; when I look into the hives I wish I had an extractor, for there is honey to gather, but they have plenty, and won't work in boxes.

W. A. ADAMS, Easton, Wis., Sept. 6th, 1875.

With a hive of 10 combs well filled with honey and pollen, we think you would be quite safe in dividing, say as early as the first week in Sept. If you have empty combs to fill out both hives, and a fertile Queen to give the queenless part, it might safely be done even 2 weeks later. This is rather unsafe work for a beginner, and where combs are to be built, it should all be attended to in warm weather; it is true that by *very* liberal feeding we may have combs built even in Nov.; but it is quite expensive business, so much of the feed is consumed in keeping up the requisite temperature. We once tested the matter by giving *one* colony a barrel of sugar in Oct. and Nov.

I lost 3 stands last winter, and the 3 that I had left I increased to 10 stands, from them I took 200 lbs. of extracted honey.

Mrs. E. BETLER.

Scoutville, Ills., Sept. 24th, '75.

I started last spring with 20 colonies, nine of them in old boxes, have increased to 50 *good ones*, all in Finn's double walled hives. I would not have a board hive as a gift if I could get Finn's. I am sometimes tempted to smile at your discussions on wintering, and your hostility to those horrible patents. Friend Novice, how about those metal corners? are they not patented? But enough of this now, perhaps you will hear from me again, if I have time. I have taken 1700 lbs. extracted honey, could have done better had I not been too much occupied in other affairs and neglected my bees. Hope to be able to attend to their wants better next time. The clover and linden were failures on account of wet weather, and the honey has been gathered since the middle of August from wild flowers.

Yours in sweetness, JACOB J. KISLER.

Adelphi, Iowa, Sept. 16th, '75.

Almost all valuable implements, and manufactured articles in common use, are patented, and no one, so far as we know, has ventured to intimate that there is anything wrong about it. The only question is, is it right to peddle individual township, county, and state rights about among the people? In fact, is it right to sell your fellow men anything that you feel sure will be of no use to them?

Such rights have been sold in our own town for the past 20 years, to our knowledge, and although bee-hive rights are gone by, rights for fences, patent well-diggers, etc., etc., have been sold within the past few days, and the money has invariably been paid by men who could ill afford to lose it, yet it has been all this time only a continual loss, for not a single one of the "great inventions" has ever proved to be of any value. One after another has been dropped, and yet the same people frequently waste their hard earnings in the same manner again. Have not the evils of this kind of traffic left their marks in every community in the land? and do such rights ever prove to be of permanent value like other

property? Of course we mean the rights that are peddled about to individuals.

A WORD ABOUT MICHIGAN.

FRIEND NOVICE:—We confess to a feeling of pride and satisfaction in perusing the good words you speak of our adopted state—Michigan. In last GLEANINGS. It is truly a commonwealth, whether viewed in the light of her natural advantages, fine climate or the wealth, enterprise and general enlightenment of her people. Indeed, in our somewhat extensive travels, no other section of our country pleases us so well. But lest some of your readers may obtain an erroneous impression in regard to our state as being a paradise for bee-keepers, we offer a few thoughts as additional to your "Notes by the Way."

A dozen years ago, there could hardly have been found in all the country between the Atlantic and Pacific a more favorable location for the apiarian, but the sad havoc which the circular saw has made in the grand old poplar and linden forests, and the consequent change of climate has reduced the really first class bee sections to comparatively a very few, and these are constantly growing less. Nine years ago, the linden would have furnished ample employment for a thousand stocks (no exaggeration) where we now write; now the fall flowers are our *main* dependence, which materially reduces our profits from the Apisary.

Then our peculiar situation—between the great lakes—gives us a very humid atmosphere, which makes successful wintering by the ordinary methods, quite out of the question. Indeed, for profitable bee-culture, our native state—New York, presents far greater inducements to the apiarian now, than Michigan does, or (in our opinion) ever can.

We give you these ideas, based on actual experience, not to discourage a single person even from engaging in our "fascinating pursuit" here in the old "Peninsular State," but simply as a statement of facts, that your readers may not entertain the notion that Michigan is a paradise for the apiculturist.

HERBERT A. BARNH.

South Haven, Mich., Oct. 4th, '75.

From the *Syracuse Journal*, of Sept. 25th, '75.

A SWEET SIGHT.

HOW THE BUSY BEE IMPROVED THE SHINING HOUR.

Mr. G. M. Doolittle, of Borodino, brought to this city yesterday, four wagon loads of pure and beautiful honey, which he sold to Mr. Roberts, grocer, in the Myres Block, for twenty-five cents per pound. The combined weight of the packages was 7,400 pounds, amounting in money to \$1,750. It was handsomely encased in 2,040 small boxes, with glass in either side, showing the white covering of the cells, and they were packed in cases ready for shipment. Of this amount, 4,875 pounds were produced by forty-six swarms of bees owned by Mr. Doolittle, who for a number of years has been much interested in the subject of bee culture. A year ago he possessed one hundred swarms, which came from two swarms he obtained in 1869, but the number was reduced by more than one-half by the very cold weather of last April. Now the number is one hundred and eight.

With the exception of Mr. N. N. Betsinger of Marcellus Falls, who has two hundred and twenty-two swarms, Mr. Doolittle is without doubt the most extensive as well as one of the best informed bee culturists in the county.

The season with us has not been very good, the spring was late and cold, heavy frosts in June, but if my bees had been fed in the spring, they would have given a good yield of honey, but I could not be with them much of the time and they were very bad about robbing, and I dare not feed them without giving the care. I had 49 stocks in the spring, increased to 109 by natural and artificial swarming—took 2600 lbs. extracted and 1500 lbs. box honey. My box honey was about 1000 lbs. less than I expected. Honey was quite plenty but it was so cold they could not store it in boxes. I run only 8 hives for extracted honey, got 2000 lbs. from the eight—don't extract brood combs. Have now got an imported Queen, but her workers are not near as large as the ones I had before. Would it be a good plan to breed from them next year? they seem to be so small and not as good color as the ones I have now. My bees are in rather poor condition for winter, they have too much honey, and I find it a great task to extract so late in the season from hybrids.

Yours truly, LEWIS KELLEY.

Smyrna, Mich., Sept. 29th, '75.

We think the *small* bees from your imported Queen an accidental quality, and not a usual one; if very small, we would send some to the person who sold her, and ask if you are not entitled to a better Queen.

EDITOR GLEANINGS:—Please find enclosed \$1.00 for which send us a Queen, or get one for us. We have 8 swarms, find one Queenless, and as we don't like to lose them would like to get a Queen for them. You asked in one of your papers who would try a swarm to get an organ with. We got a swarm three years ago to get an organ with and we now have 8 swarms and \$32.00 in money. Have bought all of our hives and honey boxes. If we winter them well this winter we shall get the organ next year. We take three Bee Journals.

AGNES & MATTIE KELLY.

Smyrna, Ionia Co., Mich., Oct. 12th, '75.

In spite of our decision not to sell Queens, we keep having orders like the above, and it is so much trouble to send the money to some one else or to return it, that we decided a few days ago that we would as a remedy turn right around and *fill* all the orders. The result is that we shall not have 100 colonies, but we will save buying sugar, and we will have as many bees in a hive as we can well get in; if they all winter, we can try our hand at Queen rearing next season. Don't send any more orders this fall,—in fact *please* don't send any more at any time until we tell you we have some ready to send.

You do not know how much your report encourages us, friends Agnes and Mattie; is Michigan the only state in which ladies can succeed in bee-culture? or is it that we can not get the others to talk out?

FRAME STARTER.

I have made an instrument for starting frames when stuck by the bees. I will enclose a plan of it. Please give your opinion of it.

HORACE LIBBY, Box 371, Lewiston, Maine.



B, rests on frames; A, comes under frame; by bearing down on the handle the frame is started without any jar. Handle of wood, lever of round steel. The implement is six inches in length.

We think very favorably indeed of the implement, and it will be an excellent exercise for our friends who are apt mechanics, as are all good bee-keepers, we believe, to see how neatly and efficiently they can get up the various little implements that are so handy in working about among the hives. We remember noticing a very "cute looking" little scraper used for cleaning the wax and propolis from the inside of hives, and also from the honey boards, at friend Palmer's. We will give one free advertisement of such implements, and where we think them meritorious, will explain them by diagram as above. When practicable send us the device by mail, that we may give it a practical test. We hardly need say that no frame-starter of any kind is required where the metal corners are used, and one is hardly needed where the frames rest on a strip of metal—hoop iron, for instance. The objection to hanging common frames on the thin strip of metal, is that it makes a most excellent device for careless persons to cut bees in two. To be sure you can avoid this by working carefully, but with 50 to 100 hives

we cannot afford to wait and stoop to look under the ends of the frames to see that all the bees are out of the way. Again, these wood supports will when used year after year, allow the metal to sink into them, and the bees will then glue them so fast, that nothing short of a man's strength can start them with the fingers alone. In regard to killing bees, one of our large bee-keepers,—in fact two different ones recently spoke to the effect that when we began to count our bees by the hundred colonies we could not afford to stop to see whether a few bees were going to be killed or not, and one of them, suiting his actions to his words, stamped a lot of peaceable little yellow-banded innocents into the dirt, just to "save them from starving" for he had given the colony away. He may be right, it may be better for them to die a quick, almost painless death, than the slow, lingering one of starvation, but can we not get along without killing them in either way? This same friend,—he *is* a good friend to you all,—when he has more bees than he wants, as he almost always has, shakes the old ones out on the snow, and makes a colony of the young bees from two hives. Now this may be a good plan, but from all we can gather on the subject we must honestly think the "old bee" theory a great mistake, for we have had bees repeatedly that we knew were all old, rear brood and raise Queens, nearly if not quite as well as young ones. To give both sides of the "corner" question, we should add that two persons have recently, when asked, been frank enough to state that they could see little if any difference in favor of such frames. One was a lady, and when we asked for something to start the wood frames,—we used a small screw-driver, such as comes with sewing machines, always carried in the vest pocket, before we adopted metal corners,—she brought a butcher knife. She was right; everything was full of honey, comb was built above the frames, and all over metal corners and every thing else, and in fact a knife with which to cut things loose was just what was wanted. She had also omitted to use the metal rabbets with the corners. The other person was Prof. Cook of the Agricultural College. He told the students to observe and see if the cornered frames were any easier to handle than those without, all resting on the metal supports; they saw little or no difference. Perhaps with a large number of hives they might think otherwise; at all events we wish every one to speak out plainly just what they think. The ladies also complained that they cut their fingers—that they had not strength enough in their hands to hold the combs when grasped by the smooth part of the corners. Unfortunately these ladies live in Michigan; if they only lived in Ohio they would have no such "troubles." Our combs don't get as heavy as iron wedges if we happen to neglect extracting for a few days, and we can take one in each hand and shake off the bees "just as easy as can be."

DEAR GLEANINGS:—The frost came the 18th of Sept., and took all our posies, so that I have been obliged to replace the honey with sugar. The wax scales made of sugar are nearly cubical while those made of honey are very thin, proving that sugar is the best to make comb of. Sawdust does not grow in this

country, and the bees will crawl under the hives unless the earth is banked up, when the rain will spatter the hives with dirt. I fed all a swarm would take up from a box over the hive, the brood nest was spread and frames placed in, the bees in one part reared Queen cells while the Queen was in the other side of the hive. What was the cause?

LLOYD Z. JONES, Galva, Ills.

We have not observed any marked difference between the wax scales made from sugar, and those made from honey. Are you not mistaken?

Bank up with dirt and then put a little sawdust on top. You can certainly collect enough for that purpose.

You divided the brood too rapidly; they frequently do this in the long hives where they do not entirely desert the brood that has been put too far out of the cluster.

My present locality is a very poor one for honey—averaging about 25 lbs. extracted honey to the hive, and the only way that I know to remedy it is to go to a better one. And the best place that I have found is in the mountains—Blue Ridge mountains. They have poplar, locust, white clover, whortleberry, and sourwood in abundance. There is also, mountain laurel or wild ivy, and I have been told that it secretes a poisonous honey or sweet, and bees will work on it, and there have been instances, of people's dying from eating such honey. You or any of your readers, will please let me know if this be true, also if they work on it under all circumstances, if not, under what, do they work on it—is there any way of telling that honey, from other honey, except by eating it. And again, would you think it advisable to swap a poor locality, for a good one, and risk the laurel? Please tell me what you know about it.

Bees are doing as well with us now as they have done this year. I told you last fall that my hives had a sour smell about them. They have the same smell now and I find that it is caused by a yellow top weed, that grows around town. I enclose you a sprig of it; you will please let me know the name of it, and if it is a good honey secreting plant. I enclose you a sprig of another weed that we have, that seems to yield honey. It has a small white flower and grows from one to four feet high, is in bloom from the 1st of October till frost, it is a very scraggy, bushy sort of weed. Please give the name of that, also if it yields honey in abundance. The one with the yellow blow grows from one to two feet high, with a bushy level top, covered with yellow blossoms.

I have one hive with drones in abundance. It is the latest I have ever known them to keep drones. The hive has a young prolific Queen. The theory that for a hive to keep drones later than usual, is a sign of an old or drone laying Queen, is not a good one I think.

T. B. PARKER, Goldsboro, N. C., Oct. 11th, '75.

As a general thing we would advise our readers to be contented and make the best of things where they are; almost every locality has its advantages as well as disadvantages, and moving is very expensive business. All we know of the laurel honey has appeared on these pages. See page 17. Is not the fault somewhat yours, as well as the locality? By the time you have learned to be satisfied with 25 lbs. to the hive, you will probably find that your locality will give more, with more experienced management. Friend Doolittle in a recent letter says he has during the past season left no stone unturned that he thought might have afforded a single ounce more of honey. As we have said before, if you have none but very strong colonies, and their hives contracted to a space that they can fill densely, we would have no fear but what they will make the sour honey ripe and wholesome, for table use at least, if not for the bees. By some means or other it seems that both specimens sent are yellow, and are only different varieties of the *Solidago*, or golden rod family. During some seasons, and in some localities, they

furnish large quantities of honey; at other times and places, they speak of it as did our friend of the sunflowers. It is unusual but not unheard of, for young Queens to rear drones so late.

I had 14 L. hives—failed to feed enough—winter so long that bees died—all save Italians. I bought all the swarms I could—commenced 1st of July. For the first I paid \$2.00, then down to 50 cents, and lastly in Sept., nothing at all. I now have 18, and two box. I have extracted about 200 lbs., and will extract 100 more, all since 4th of July. Since the rains in August, we have had just a flood of honey, the box hives around have been filled, and combs built under the benches in many instances. Swarming was kept up until 1st of Oct., or rather the middle of Sept. Such an overflow of honey has not been known within fifty years past.

I want to know what has ruined all our beautiful honey? Besides smelling bad, it is bitter. It smells like ragweed, and tastes like milk spoilt with ragweed. I have been trying for a long time to find out the plant but cannot—all alike as far as I can learn in this valley of Ohio. I am a little fearful of this high flavored honey and will take all the honey I can get and feed lots of sugar. I want to know whether our common shot lags may not make good feeding cloth, it is a kind of duck, and every store has them, I have quite a number of them.

W. F. PATTERSON, Freestone, Ohio.

We are unable to advise in regard to the bad tasting honey, but are inclined to think the bees have the power of making many kinds of honey wholesome if they can have it in the hive long enough where there is an abundance of bees. Even the honey gathered from the seed onions in the Eastern states, rank and strong though it may be at first, entirely loses this onion flavor after it is sealed up, so it is said; and we know of nothing better to suggest in your case, than to extract all the unsealed honey at the close of the season. Shot bags would very likely answer for feeders; you can quickly test them.

DEAR SIR:—With this I send you a small sample of *Aster honey*. When first taken from the hives it is nearly as thin as water, or Oliver Twist's soup, yet if it is left in the vial it will candy in a short time. We are having a fine yield from it and beautiful clear weather for the bees to gather it—nights frosty but it does not injure the bloom. If I had led my bees during August as I ought to have done, I would have gained largely by so doing. If I had the bees I would get the honey. I will do better next year. I have given Mr. Long's foundations a trial and they are certainly a great help. I like them better than those I made as they are thicker and easier to fasten into the frames. Bees will build on foundations faster than they can on natural combs as more of them can get to work at once. I expect to try them in boxes next season.

Christianburg, Va., Oct. 8th, '75.

J. R. GARDNER.

The sample of honey sent we find very pleasant, and it is quite thick and of a rich yellow color. Such honey we feel sure will always sell, and we are sure it will always pay to feed bees in August when they are not getting anything, even if they should get nothing at all in the fall. Friend Gardner's method of sending samples of honey by mail pleases us; a block of wood one inch square and about three inches long, has a hole bored through it lengthwise, and the vial of honey is wrapped in paper and pushed tightly into this hole, making it secure from damage even if the block were thrown across the room. Sending samples of honey by express is expensive business as we have had reason to feel, but a two-cent stamp covers the cost as above, and if tough, light wood—basswood, for instance—be used, there can be no possible chance of daubing the mails with honey.

Some one wrote in GLEANINGS that honey bees worked on sunflowers. I wrote you that it was a mistake, that I had seen a kind of bee gathering pollen off sunflowers, but never once the real honey bee. You wrote me a postal saying that bees do work on sunflowers. There were, say 100 sunflowers growing within two yards to four rods of my door this year and I watched them every day while in bloom and never saw a honey bee on them. In 55 years that I have kept bees I have never seen a real honey bee on a sunflower. Another thing: I sometimes read in bee papers, of bee-keepers watching their Queens coming home from their flight, they tell us they have seen the sign of impregnation, on the Queen. Now what is that sign? I would like to know I have both read and heard that in the act of copulation a part of the drone remains attached to the Queen and that she carries it away, and this is what the bee-keeper sees and knows that all is right. I know that a single thread of a spider will hold a bee till it dies, but a half dozen of spider's threads will not pull a drone asunder in that way. I have tried it and so may you. You may therefore put these two items in your list of Humbles, they are so, at least to JOHN DAWSON. Pontiac, Mich., Oct. 4th, '75.

No, no, friend Dawson, please don't think our friends have made false statements just because you have not happened to see things as they mention. There are many things in nature as well as in science that seem utterly impossible, and even in your Bible you find many things that at first view might appear glaring inconsistencies, yet is it not very unwise to say you do not believe them?

"Blue Eyes" wanted a garden,—her papa planted the seeds, explaining meanwhile that they would make trees that would grow "way up high," higher than he could reach, and that they would bear "great big posies," as big as a dinner plate, etc. Now this garden with its fence about it—pine sticks stuck in a circle—was a source of much watching and many visits, and when the great blossoms unfolded, our bees were almost constantly at work on them; in vain did we try to have her put her fingers on the yellow Italians as we did, "I 'fraid," was her reply.

Now we think we know why your bees do not do thus; if we had the autumn flowers here that you have, we should think our bees "idiots" to waste their time on sunflowers.

Have you not seen bees so busy during basswood time that they would not touch a frame of comb honey if left on the top of a hive all day long?

Again: it is a very common thing for all who rear many Queens, to see them return with the marks you mention. We see such more or less every season. The appearance is much like a bee that has lost its sting, except that the white substance is much larger, and is so white that the Queen is plainly conspicuous as she flies in the air. It is important to know this, as such a Queen may be introduced at once where wanted. As the eye of man has probably never witnessed this mysterious meeting, we shall have to remain in ignorance somewhat, perhaps. Did you never see the seed pods of the touch-me-nots when they are so ripe that they explode at the slightest touch? Well, it is supposed that the drone expires somewhat in the same way, for we do know that the mass of matter attached to the Queen, is really a portion of the drone's body.

This has been the poorest season for honey (bees have done rail-road business swarming) since 1863. We commenced with 64 colonies, increased to 86, nearly all *large*, (we like such best for winter) and have extracted 13200 lbs. of honey, nearly all basswood,

and have about 400 lbs. in frames. We think the *long* idea hives are most convenient, but we can see no difference between the amount of honey stored in them and the *fall* idea hives. The best yield was from our *cube* idea hives of which we had 7, with 13 combs 17 inches square in each hive. From the poorest one we obtained 108 lbs., from the best one 162, 113 of it basswood, stored in 12 days, most stored by it in one day, 17 lbs. Why they should have done better than the others we are unable to explain, perhaps another trial might change the result. J. H. TOWNLEY. Tompkins, Mich., Sept. 26th, '75.

The largest swarm I ever had came out last Friday, Aug. 20th. Having no comb, I gave them a sheet of honey from upper story of parent hive, and seven empty frames. In five days they have about half filled the hive with comb. Last spring I started with four hives, two of which were very weak, and now have 8 strong colonies, and considerable box honey. In the three years that I have had bees, I have had lots of fine fancy projects for hives, boxes, houses, etc., most of which I have found foolish before I had experimented on them much. Last spring, I thought I had discovered just the way to ensure straight combs. It was to run strings across the frames to be built in by the bees, to act as both guides and supports. I prepared a few frames by making awl holes through the sides, through which I wove cotton cord backward and forward, and then smeared with wax to make attractive. When I had my first swarm I put in a few of these, and congratulated myself thinking I had done a big thing to help them on. I thought differently when I saw them day after day, afterwards, tugging at the end of a line like a lot of sailors, trying to get these hinderances out of their way. But hold on, my letter is getting longer than their string.

JAS. E. DEAN, Fishkill, N. Y., Aug. 26th, '75.

Many thanks, friend D., we do like to hear of your failures, for even if we do not publish them, we rarely forget them, and when tempted to try similar things, have the advantage of knowing what we may expect. Suppose now you had patented this, or had advertised receipts for \$1.00, or something of the kind,—and in fact, all the receipts we have ever seen offered for sale, are much of this nature,—how would your patrons have felt after having made such a test as you describe?

A. I. ROOT, Dear Sir:—Last winter I was much annoyed by mice getting into my hives, and expect to be the coming winter. To guard against it I constructed "*My metal mouse-guard*" which I enclose.

GEO. W. HORNER, Dubuque, Ia., Aug. 3d, '75.

FIG. 1. B

FIG. 2.



Let Fig. 1. represent the front, and Fig. 2. the end view of this metal mouse guard. B is all made of tin. B, is $4\frac{1}{2}$ by 2 inches, and A, $4\frac{1}{2}$ by $\frac{1}{2}$. The openings for the bees are cut in the side of B, 5-16 by $\frac{7}{8}$, and the points of the teeth thus left, are folded at right angles about $\frac{1}{4}$ of an inch, that they may be securely soldered to the middle of A. To use it put A. on the alighting board, and let B. come up tight against the front of the hive, the entrance blocks resting on and against them, where such are used. These guards can be made by the quantity for about 1 cent each, and *where mice are troublesome*, will well repay the expense.

I commenced this season with 40 stocks of bees—increased up to basswood season 25. From 44, I extracted three and one-half tons. From 22, I got 800 lbs. comb honey. Increased on buckwheat 28 swarms. We have had a big frost and no more honey. Will have to feed some.

D. J. BARDWELL, Omro, Wis., Sept. 16th, '75.

I got one ton of honey from 25 swarms, mostly 1 lb. boxes. C. D. JONES, Kirkwood, N. Y., Oct. 5th, '75.

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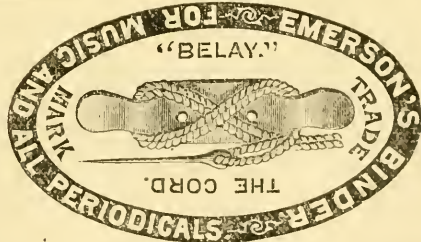
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A. I. ROOT, Medina, O.

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Or how to Realize the Most Money with the Smallest Expenditure of Capital
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PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT.

Vol. III

December, 1875.

No. 12

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. Clarke, and Mrs. Tupper.

Bee-Keeper's Magazine. King.

Bee World. A. F. Moon & Co.

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DEAR SIR:

Amboy, Ills., Sept. 6th, '75.

The Foundation Combs you sent me were rec'd all right. I at once experimented with them. Extracted honey from one in three days after placing it in the hives. They are just the thing so long needed and can be used for almost every purpose and way about the hive.

Signed, Yours truly, R. H. MELLE.

DEAR SIR:

Brookfield, N. H., Sept. 11th, '75.

The Combs are perfectly satisfactory. This lot I put into 19 Langstroth frames and put in upper and lower stories both, between full combs in various hives. Some combs were wet with sweetened water, some were not, it made no difference. Some of them are full of honey cells lengthened out and partly sealed.

Signed, Yours resp'y, E. C. NEWELL.

DEAR SIR:

St. Johnsville, May 18th, '75.

In a hive that was about ready to need combs I put a large frame containing half a dozen small ones, small ones 5x6 square, in half of them I put pieces of Foundations, in the other half I put a guide of wax across the top one-fourth inch in width. Bees have commenced on both alike; cells in Foundations half an inch deep; some honey but no eggs yet. A great many will want a small quantity at first. If I could see you I think I could make some valuable suggestions.

Yours, M. QUINBY.

DEAR SIR:

Colerain, Mass., Aug. 16th, '75.

Mr. Langstroth sent me some days ago part of sample of your Foundations which I placed in a colony and fed them, (as the bees are getting no honey) I would say that we were well pleased with the way the bees lengthened out the cells.

Wm. W. CARY, Sr.

DEAR SIR:

Greenfield, Mass., Sept. 13th, '75.

Those specimens of Comb Foundations were put as I informed you they would be, into the hands of others for experiment, as I have no bees. Mr. Cary who is an expert showed me combs very beautifully finished from a Foundation.

Yours very truly, L. L. LANGSTROTH.

DEAR SIR:

Christiansburg, Va.

I am much pleased with the get up of those Foundations, and know from experience that they will answer a good purpose.

Resp'y, J. R. GARDNER.

DEAR SIR:—My experience with your Foundations this year is but a repetition of last years'. I can only say with Mrs. Tupper, "they are as perfect as can be." I have noted the objections of Mr. Quinby, and as proof positive of his error send you a complete comb, filled and sealed.

Your friend, AARON PENNINGTON.

DEAR SIR:

Monroe, N. Y., Sept. 11th, '75.

Enclosed you will find P. O. order for \$5. in return please send me by express five pounds of your artificial Comb Foundations. The only objection I have seen made to these Foundations is that the centers will be "thick and tough;" this to me is a recommendation, and I think will enable me to ship honey in the comb with more safety, the combs being less brittle.

Respectfully, THOMAS SHARRON.

DEAR SIR:

Borodino, N. Y., Sept. 13th, '75.

Your card is at hand. Would say that owing to the delay caused by the money not leaving this office I did not receive the Foundations until our honey harvest was all over. I filled six boxes with them and in seven days had them filled and capped over.

G. M. DOOLITTLE.

SEED FARM FOR SEEDS
OF ALL HONEY
PRODUCING PLANTS.

CHINESE MUSTARD!

BEE-KEEPERS! TRY IT.

IT GROWS almost any where, is not affected by severe drouth or frost, blooms over 70 days, yields enormously, and is as staple as wheat, sent postpaid, with directions, etc., 1 lb. \$1.75. Three lbs. and over, by express, not prepaid, \$1.50 per lb., per oz. 15 cents, package 5c. Also Black Mustard postpaid 45c, oz. 10c. Motherwort, oz. \$1.00, pkg. 10c. Linden (*Silia Americana*) per lb. 75c. Melilot (sweet clover) lb. 25c. All warranted pure and reliable.

Remit by P. O. order. Address

North-Western Apianian & Seed
Warehouse.

WILTON, ROCK CO., WISCONSIN.

1875. ITALIAN BEES. 1876.

ITALIAN BEES
IN SAN DIEGO, CALIFORNIA.

I AM now prepared to fill orders for Italian Bees at the following prices.

For pure Italian with tested Queen, from \$15. to \$20. per hive according to number purchased by each customer.

For ten hives or more of good Italian stocks, each, per hive \$10. All in gold coin.

Bees are in the California or Harbison hive. The hives are made of the best material and workmanship, and well painted.

The Queens are all of the present year's raising. The combs are all straight and are also mostly of the present years make. In short, all are in as perfect condition as can be found in any apiary in the World.

Send stamp for circular.

Terms cash.

Address J. S. HARBISON, P. O. Box 22,

2m

San Diego, California.

GLEANNINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. III.

DECEMBER 1, 1875.

No. XII.

FRIEND ANNA'S QUEENS AND QUEEN CELLS.

I HAVE noticed that Queen cells are often both enlarged and lengthened after being sealed over. Something you said a while since made me determine to speak to you of it, but I have always forgotten it in writing.

I have twice had worker bees hatched out of Queen cells that were caged, which may happen often, when colonies are so long about getting a Queen. In the last case some food was remaining in the cell, so that a deficiency of food had nothing to do with it. Perhaps you have noticed that bees often seem busy doing something to a capped cell, mayhap murmuring some charm over it the while. May not this proceeding exert some influence over the inmate?

Last spring I had a colony swarm out under the following circumstances: I removed their Queen and gave them a capped cell; some time after, I found them swarming. While they still filled the air, I examined the hive to see if there was a cell which I had overlooked. I found only the one cell, which had not hatched, and as it was past the time, I cut it open and found within, the tiniest specimen of a bee imaginable, but dead. The cell was astonishingly large, the walls of it at least $\frac{1}{4}$ of an inch thick. Why did they immure her so strangely? Do you suppose they divined that she was not a proper Queen, or became impatient at her long tarrying within and determined that she should not emerge at all?

I was just about to prepare a table similar to one that came out recently in GLEANNINGS, about the length of time requisite to hatch Queens, etc., but the longest and shortest time mentioned accorded exactly with my own, so mine was not needed. I find this year my Queens are almost all much longer than usual in hatching, and this without reference to the weather or strength of the colony. "My bees never would behave like other bees," occurs to me constantly. I have 44 or 45 Queens and not one of them over a year old, and only five or six even that old. With all kinds of Queens it is the same, bought from A, B, and C, raised at home, hatched in nursery, cage or open hive, in big hive or little hive, when they get to be a year old or over they are gone. But perhaps there is some method in the madness of my bees this year, for in some cases I can see that the Queens, though so young, had outlived their usefulness.

ANNA SAUNDERS, Woodville, Miss., Aug. 30th, '75.

In our opinion, it was not a deficiency of food, but because the larvæ were too far advanced, that they produced a worker bee instead of a Queen. Sometimes a very small cluster of bees will produce Queens that are apparently almost worker bees, and we have had them all the way from a *bona fide* worker clear up to a perfect Queen. Some specimens would lay no eggs at all, others a few dozen drone eggs, others still a small cluster of worker brood, and from this up to three months Queens, or those that lived a year only, while perfect Queens live 3 or 4 years. Since we have practiced giving the bees nothing but eggs, or at the farthest, larvæ so small as to be just visible to the eye, we have had no trouble with short lived Queens; other things, such as plenty of bees, pollen, honey, good weather, and the like, of course being equal. We have often seen the very large cells, and

rather opine that they build them for want of something to do, for they sometimes build them with nothing at all in, and most frequently when they have neither brood nor eggs; just at a time in fact when we may expect fertile workers.

KATIE GRIMM OUTDONE.

WHAT A MISSOURI LADY CAN DO.

OUR bees have not done well this season because there was almost no honey to gather till late in the season. With us the honey season closed on the 9th day of Sept. Mrs. Annie Larch extracted 1250 lbs. of honey in one day (with Novice's extractor), and says that she can extract 1500. We commenced the season with 75 colonies, took from our strongest 120 lbs., averaged 86 lbs. per hive and increased about 50 per cent. Our pure Italians again proved themselves far superior to the hybrids early in the season. During the honey season we had none but pure bees bred from our imported stock, and they are excellent honey gatherers. We have used two story and double width hives with Langstroth frames, they each possess some advantages; the amount of honey taken from each was about the same. We take only extracted honey. For box honey the brood chamber should be just large enough for the brood, and that will depend altogether on the Queen, usually from 5 to 10 Langstroth frames will be required, and sometimes as high as 15 frames in the brood chamber. We have found a great similarity in the Queens of each stock. I once bred from one stock about a dozen Queens, not one of which ever used more than four frames for brood, while those bred from prolific stocks were excellent, not one exception among the whole, but the drones were from stocks equally good (which is equally important).

I would give directions for safe wintering, but there is hardly anything left for me to add since B. and B. Bin's excellent article on wintering. If bee-keepers will follow his directions their loss will be light if any.

Should they get too hot and uneasy it may be necessary to air them at night to prevent dysentery. Large colonies want plenty of both upper and lower ventilation, while small stocks need but little upward ventilation, and nucleus hives none at all, except at the bottom.

E. C. L. LARCH.

P. S.—Always leave entrance of hive open.

Ashland, Boone Co., Mo., Sept. 1st, '75.

The above, by some means, got out of sight in our absence when it was reached, or it would have appeared at the proper time.

We presume Mrs. L. had all the bees bro't her with the bees all brushed off, which would make a great difference; it may be that the extractor also had something to do with such an astonishing day's work, and while we are about it perhaps we might as well give the Dr. some credit for the way in which he probably has his implements arranged for the work. Will he please tell us more about it? We well know that this may make a half difference or more. If we are going to be obliged to sell our honey at 8 and 10 cents, we want everything as handy as can be. We are very glad indeed to receive further evidence that about

the same amount of honey may be expected from hives worked either spread out or piled up two stories; we perfectly agree that for box honey the bees should have only so much room as is really needed for the brood, that they may be *forced* to use the boxes. The house Apiary offers unusual facilities for this. We also have remarked that when a poor queen has been replaced with one reared from her own brood, the daughter is little if any better. At the present low price offered for extracted honey it *may* pay to feed it back, to be put in Mr. Long's foundations, and therefore we wish to know all about getting comb honey before the time comes for making such experiments.

SELLING RECEIPTS, NEW MODES AND PROCESSES OF DOING THINGS, ETC.

IN the *A. B. J.* for Nov., we find that "Thousands of swarms can be saved by Stauffer's New Mode of Wintering on Summer Stands." Price \$1.00; money refunded, if not satisfactory. We sent the money, and the following came to hand in due time:

MR. A. I. ROOT:—Yours of the 11th at hand with \$1.00 enclosed. In reply will describe the new method of wintering bees on their summer stands, which has given entire satisfaction to myself for the past four winters.

First; they should have a fertile queen, and be populous in bees.

Secondly; should have not less than 15 to 18 lbs. of good capped honey, and that as much above the cluster of bees as possible.

How to put them up for winter. First get a 2 inch plank, 16 feet in length, and broad enough to set the hives on. Lay it on blocks about 8 inches high, leaning a little forward. On this plank set your hives, one against the other. It will hold about 10 swarms. Now take all the surplus honey boxes out, leaving the space empty. Bore a half-inch hole in the middle of back of each hive, four or five inches from the top. Insert tin tubes, of which I send you a correct pattern, as ventilators. Close the entrances to $\frac{3}{4}$ by 1 inch.

Insert one of these tin tubes in the back of each hive, get nice clean rye straw, threshed with the flail, make it a little damp, put the straw first, (entirely around the row) against the hives fully two inches thick, bending the tops of the straw over the hives as you go. Lay a plank on top to keep straw down. Get four faths 16 feet long, to hold the straw tightly against the hives; tie them together at the ends, two at or near the foot of the row of hives, one on each side, and two near the top, one on each side. Make the faths hold the straw tightly against the hives everywhere, strong twine or a band of straw will hold the faths together at the ends. See that the entrances and tubes are not closed by straw.

In this condition your bees will not consume more than half as much honey as if left unprotected, and will keep warm, dry and healthy, having every opportunity to fly out during the winter. If you wish to know how your bees are doing under the straw, just interview them by striking lightly on the bottom board; if you hear a quick reply with a buzz all thro' the hive, they are all right.

B. G. STAUFFER, Bachmansville, Pa.

We have a string of protests to make, to all parties concerned in this kind of work. The process, if neatly printed, would have taken only a small portion of a single page, in any of our Journals, yet our friend has no scruples in taking \$1.00 for it when badly *written*; an amount that will pay for quite a treatise on almost any of the industries of the day. Instructions for making wax flowers were recently advertised, and the whole return made for the 50 cents was a small slip of paper, yet a very pretty little book is to be had at our book stores, on the subject, for the same price. The fact that these people *paid* large sums for

this same information, is no excuse, more than that we unwittingly paid genuine for counterfeit money, is an excuse for passing it. We hope we may be excused for intimating that no magazine should wrong its readers by receiving such advertisements, or at least, that they should first examine the process and see if it is valuable; and while they are about it, *if it really is good*, why not give the man his dollar, and publish the good news to thousands at once? If Mr. Stauffer's plan is all that he claims, it would pay any Journal to buy it, even if it cost hundreds, instead of one dollar, and if it is a fraud, no amount of money should secure its insertion.

Mr. Stauffer, we are not satisfied, and demand the return of our money; your plan is not new, and the assertion that the bees will eat but half as much honey, is false. Sometimes, when thus protected they winter well, and again they die most disastrously, as you are well aware, if you have read the *Bee Journals*. The Quinby hive and a great many others, were designed for this very purpose, but not one of them has, *as yet*, given anything like such success, as placing the hives in good cellars. The latter would keep a pail of water from freezing, but of how much avail would two inches of straw be, during a zero freeze? Thousands of colonies winter out-doors without *any* protection, but what does it prove?

OUR ENGLISH COUSINS.

ON the 25th of Aug., we rec'd a pleasant letter from John Hunter, Hon. Sec. of the British Bee-Keepers' Association, and author of "*A Manual of Bee-Keeping*," Eaton Rise, Eng. The letter also enclosed the money for quite a bill of items, Extractor, etc., with the following remarks:

I shaply want these things to show at our Exhibition, what you are doing in America. I believe you are ahead of us here. If you are not in a position to send them *at once*, do not send at all.

Even had we deemed it advisable, we had not time to fit up a *nice* machine, we therefore hastily packed up and sent along such as we happened to have on hand, thinking that we should at least give only a fair sample of what we ordinarily sell. In due time came the following:

Your extractor and contents reached me at the Crystal Palace, about a quarter of an hour before the show opened. I had just time to unpack and put things on the tables before the judges began. I marked everything at your prices, sinking the freight which was 21s. As I thought I would give any one an opportunity to buy the strange goods, nearly all were sold, which must be gratifying to you. But I am sorry to say, the extractor arrived with tap broken, and some thief at the Palace stole the loose large wheel with handle.

Your extractor competed for the prize, but was beaten by a more compact machine which empties *both sides of comb without removal*. It was generally, however, conceded that your movement was the best, and I have no doubt the wheel was stolen as a pattern. I was so very busy that probably many persons examined the things more than I did. The metal corners I thought very useful, but the Queen cage I do not understand; why the divisions?

We had several novel and valuable exhibits. An especial one, a simple apparatus by which a child can make and furnish to a dozen frames, wax sheets embossed or plain, all fixed in 10 minutes ready for the bees to go to work on! Metal plates, smelters and gauzes will be all superseded by this, which can be sold for half a dollar!

JOHN HUNTER.
Eaton Rise, Ealing, W. Sept. 27th, 75.

Extractors allowing the combs to be reversed without removal, are by no means new; but as much greater bulk and complication are needed in their construction, they have so far as we have been able to learn, been considered impracticable. If the implement mentioned fills the frame with a *sheet* of comb, it is truly a marvel, and we shall doubtless soon hear more from it. The end apartments in the cage are to contain food for the occupants.

In the report of Crystal Palace, in *Bee-Keepers' Magazine* for Oct., we read:

Immediately following the hives, appeared the *honey extractors*, and the first that caught my eye, was "Novice's" well known \$10. machine, which, the Honorary Secretary informed me, had been imported by himself on purpose for the show, and had only arrived a quarter of an hour before the judging commenced; the gearing of this machine was much admired, and pronounced by many, the best in the show; indeed it was so good that much to its owner's chagrin, before the close of the show, some thief stole it, doubtless as a pattern.

All the other machines were of English make, and to Mr. Cowan, who exhibited three of distinct patterns, was awarded the prize for No. 160, "The Rapid;" this machine is very compact, and although not so easy going as Novice's, has the additional advantage of permitting both sides of the comb to be emptied without removal from the machine. This is accomplished by placing two combs in wire cases, hinged at opposite corners, and which being set revolving, empty one side; the cases are then turned back on their hinges, which brings the other sides to the front, when their contents are also slung out. The idea is simple and ingenious, and I think the prize was fairly deserved. Some other good machines were also exhibited, their general fault being clumsy in size and expensive.

Although our friends across the water seem to have bestowed an unusual amount of thought on the subject of implements for the apiary, as is evinced by the fine illustrations in the *British Bee Journal*, yet for some reason or other we do not find any such encouraging reports of large yields per hive, as fill our Journals, and the most cheering part of it is that we have these from almost every section of our United States. That they do not care for their bees as faithfully as we do, we cannot think for a moment, after reading their contributions, and the only conclusion seems to be that they lack the pasturage that we have; perhaps the bountiful yields that we get from our Linden forests. Who can tell us?

There are many points in our own country, formerly supposed unfit for bee-culture, yet we are happy to notice every year, reports of successes from localities that were supposed incapable of furnishing great yields. And now it begins to look as if there were no exceptions to the rule that, honey will always be found where there is sufficient energy and intelligence.

HONEY DEW.

AL ROOT:—As you solicit information in regard to Honey Dew, having had some experience with it, I comply with your request; begging leave to differ with those who consider it an animal production. Honey dew accumulates in this section of the country in great abundance, forming the main bulk of honey gathered after the first of Aug. That collected from the alder is very good; not as light a color as the white sage, but nearly as good flavor. From strict observation I am satisfied it accumulates in the air, and has probably some relation to the aroma of flowers; being expelled at the bursting of the petals, and that which accumulates in the receptacles of the flowers is what the bees gather during florification; each plant generating a variety peculiar to itself as to flavor and color; white flowers producing clear honey, and colored flowers the darker

shades. Honey dew being the product of all plants, its color is a blended shade between the darkest and lightest.

The most probable inference is that saccharine matter is gradually passing into the atmosphere in a gaseous state during the entire season of inflorescence of flowers, and gradually becomes attracted towards certain plants and localities, to which it affinizes, where it condenses and falls on certain plants that have negative attraction. The alder of this State seems to possess more than other plants, although along the foot of the mountains it falls on all vegetation more or less; sometimes in such profusion as to kill melon and pumpkin vines. But it is seen on the alder before it falls on other plants in such abundance as to run down the limbs and body of the tree to the ground, and drip off the leaves so as to cover the rocks and ground beneath. In order to test its quality two of us gathered enough in two hours, by washing it off the leaves, to make, after it was boiled down two gallons, of thick syrup, which resembled maple syrup in color and flavor.

Since seeing articles attributing honey dew to animal origin, I have made especial microscopic examination and for several weeks there was no indication of animalcula, but towards the latter part of the season tribes floating in the air became adhered to the leaves, and a wood louse similar to those infesting garden vegetables, infested the under side of the leaves. As yet I discover no metamorphic condition; if so I will report hereafter.

According to your Pa. correspondent, honey dew could not be deposited from insects adhering to the underside of leaves, as the topmost leaves are as much covered as those below. According to vital chemistry, saccharine matter is one of the constituents of food, and like other constituents, is generated by vegetative action; the growth of vegetation combining the gaseous properties of air with the mineral substances of earth, forming cellular substances for the production and sustenance of animal life. Therefore it is no more reasonable to suppose the saccharine matter is produced by animals, than it would be to suppose starch, gluten, fibrine and other elements are thus produced. Some plants have the power to generate almost exclusively saccharine matter, such as the maple, sugar cane, etc. There seems a wise provision in this, as it forms the entire food for a great variety of insects, besides being a constituent of all food for animals and man.

D. N. SMITH, Sec'y of the Arrowhead Bee Co.
Arrowhead Hot Springs, San Bernardino Co.,
Cal., Sept. 14th, 1875.

When at friend Bolin's a few weeks ago we were asked to tell the source of some honey, of which we were helped to a large slice in the comb. It had a very sweet, rich taste, something between brown sugar and liquorice, but perhaps smoother than either. To give it a good test we ate of it quite freely, and for almost the first time in life, we felt a little unpleasant after eating honey. We were told this was probably the aphide honey, or honey dew; it was gathered in June, and Mr. B. told us the bees and aphides were both swarming on the forest trees at this time.

In the article above there are several points that we can not help thinking are erroneous, especially in regard to saccharine matter passing off into the air in a gaseous state but as we are unable to give any other explanation, and as our friend has really gathered the dew in a considerable quantity without aid from the bees, he probably knows more about it than we do. It has been suggested that the aphides swarm in the air in large numbers, as mosquitoes do, perhaps so high up as to be out of the range of vision, and that they then exude the dew that has been secreted from the vegetable matter they have been feeding on. This seems to us to be by far the most rational explanation.

The terms positive and negative, in the science of electricity, have a definite meaning, but when applied to plants and animals at large, have to our mental vision a decided mistiness.

HIVES, ENTRANCES, ETC.

THE following was sent with no name appended. As it gives some valuable items we publish it, and if the writer will send in his name, we will give proper credit.

DEAR NOVICE:—R. L. Joiner on page 98, says: "The two story principle is all right, but I want the bottoms of my frames to be $\frac{3}{4}$ from the bottom board, and the top of the hive to be $\frac{3}{4}$ inches above top of frames for tucking quilt, and when the upper story is on I want only $\frac{3}{4}$ inches between tiers of frames. I can have all this with an upper story made on purpose and cannot without."

Friend Joiner can have just what he wants with upper and lower stories alike. For example; my hives are for Gallup frames, the frames when in the hive hang 5-16 from bottom, sides and top of hive—5-16 space all around. The hive is made 5-16 less than 12 inches deep and a flange nailed around the bottom and 5-16 lower, making the hive finally just 12 inches deep. You will perceive from this that one hive placed on top of another will have their tiers of frames just 5-16 inches apart. These distances work very nicely with me, and on the same principle any other distance can be secured. I made my flange of common lath, but I think $1\frac{1}{2}$ inch hoop iron would be very nice. In nailing on the flange put a strip of wood 5-16 inches under the hive on a perfectly true surface and you can get a "dead fit" between hive and bottom board. Friend Joiner says he could not be hired to use a hive with a movable bottom board. For my part I want no other, but I too think the Langstroth entrance blocks the best I ever saw, and should have a decided contempt for two inch auger holes. Only think of a big swarm hurrying in and out in the height of the honey season and fairly tumbling over each other in their most eager haste. I must have an opening to my hives the full width and regulate it according to season or circumstances. If I want an opening through a wall 4 or more inches thick, I would make it thus: A, alighting board, B, entrance, and W, wall. Such an entrance would be as a portico, made any width required and regulated like any other entrance.

My notion of a house apiary is to have it hexagonal, and have the "large double door" facing north exactly. It should be 3 stories high and accommodate 45 hives. The upper story would be handy for storage if not wanted for bees. Now will you tell us what is the use of a door step 10x14 inches for a 2 inch auger hole?

In your supplement, page 2, you say, "To work nicely the frames need about as much room to hang in the extractor" as they do in the hive, and to do this there seems to be no other way than to make the extractor to fit the hive it is intended for." My extractor is at present arranged for Gallup frames, but in a few minutes I can adapt it to the Am. or Standard, or any frame smaller than these. The frames hang in the extractor as they hang in the hive. One of the bearings is movable and in a few minutes can be moved outward or inward to accommodate any frame, as above.

Do you think we will ever have a standard frame? Such may do for the good, staid people of old "Faderland" but for uneasy, restless, wide-awake Yankees, bah! "No pent up Ufaa contracts our powers," etc. For my own part I want "something new every day" and I have an idea Novice is pretty much so.

The hoop iron idea will certainly answer the purpose, and will also obviate the necessity of bevelling the lower edge of the dollar hives, but we shall have to use bottom boards unlike the covers.

We thought of such an entrance to our house apiary, but discarded it as being too expensive and too cold in winter. The 2 inch holes are very cheap, and can be filled with wool so as to be almost as warm as a solid wall in extreme weather. Could you have seen them use the broad door steps during a moderate yield of honey in Sept., you would no longer doubt their utility. They with their support-

ing brackets are made very cheaply with a buzz-saw.

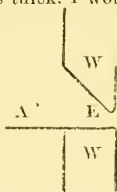
Would you advise one who uses a Gallup frame, to constantly whirl the extra metal and machinery required to contain a Standard if he should never use the latter? Why do Doctors use a small gig, instead of a buggy for two?

We agree with you in regard to Novice and fear that unless he has strength of mind enough to get over a part of that unfortunate weakness, he will remain a Novice for all time to come.

OUR OWN APIARY.

NOV. 1st.—We reduced our bees to 99 colonies instead of 108, and concluded they were pretty much all well supplied with winter stores, but after trying them all on the scales we were much disappointed in finding that we dare risk very few of them indeed, especially since we have them so much more populous than usual. There was no help for it, and we dared not feed syrup at this late day, so we gave them the candy bricks. By the way there is one very great thing in favor of the candy which we have omitted to mention, and that is, we can feed at any time and under any circumstances without the least fear of robbing. Robbers will take the candy it is true, but as it is too slow work to quarrel about, you can open hives and put the candy on top of the frames at your leisure; if a robber can stand it to wait until he gets a load, all right. It is our impression that this candy will answer all purposes for stimulative feeding in the spring, and it can be given regardless of the weather.

We have united 18 colonies by simply lifting bees, combs and all into the hive desired, and have yet to see a single Queen attacked, that is when done in cool weather. We have also been agreeably surprised to find that where hives are no farther apart than as we have them—6 feet from centre to centre—any one may be united with its neighbor and removed at once when the bees are flying, for they will all find the hive by hearing their comrades call, and this so completely, that not a single bee will return to the old stand and be lost. With some of our first trials we had much trouble; the bees that went back to their old home every pleasant day, were allowed to cluster on an empty comb and were then carried to their comrades, but every night found them back at the old spot, and finally many of them died on their old stand. We wondered if there was no way by which they could be made to voluntarily take up with a new location like a new swarm, or as did those mentioned on page 62. Well, we did it in this way: our sick hive had bees dying by the handful almost daily as usual, and despairing of ever curing them, we finally killed the Queen, hoping that bees raised from a new Queen even in the same hive would prove free from this twitching malady. This Queen, by the way, has been unusually prolific, or the population of the hive would have failed with such an enormous draft on it, and as a consequence we have been obliged to supply them with an unusual quantity of food. Well, after killing the



Queen we decided to unite the bees with a nucleus in one end of the Standard hive, distant about 10 feet, and for want of a better way, shook all the bees off the combs in a heap before the entrance, removing the old hive entirely. Now although another similar hive stood much nearer, the bees on the wing gathered at once to the Standard hive attracted by the loud humming of their companions, and all went in as a new swarm. Although several fine days have passed not a bee has gone back to its former home; for some strange and unknown reason, they seem to have made a unanimous agreement among themselves to forget all old associations and adopt the new, and several experiments since, result in the same way; after the weather gets cool in the fall—it *may* work at other seasons—shake the bees in front of any hive you wish them to enter, take their old hive clear out of sight, and the bewildered bees will then, in response to the call of their comrades enter, and stay in the new abode if it is near enough for them to hear the call. One experiment succeeded perfectly when they were moved as much as two rods. We are a little surprised to find that not a single Queen has been molested in these experiments.

But is not all this uniting colonies that were divided only a few weeks ago a great waste of both time and trouble? Frankly, it is. About Sept. 1st we had a number of hives that seemed too small to contain the bees that hung on the outside, but when the autumn yield opened, these were just the ones that filled up nicely, for winter and now are all that we could desire in bees and stores, while similar ones that were divided about that time have to be "tinkered up" in both bees and stores. It is true we had a few Queens to sell by running up to 108 and then cutting down to 90; but it would have been much less labor to have built each colony up to full strength as we went along, i. e., taking a few bees and combs from each of several hives.

Nov. 20th.—Our bees are all housed and right glad are we, for although we tried this season to take it all coolly and methodically and to have no disagreeable features connected therewith, yet it turned out much as usual after all, and we are firmly determined that if the house apiary winters anything like as well as the others, we will never more lug bees into the house to winter.

Our bees are not all in the condition we could wish after all. Those in the house apiary have too few bees, all being new colonies made late in the season; the others have plenty of bees, but on this very account were found so short of stores in Oct. that we gave them candy, and although they stored it in the combs at a very fair rate during warm weather, when it became cool, the candy was taken very slowly, and we have left them out full two weeks later than we should have done, just to let them finish their candy, and since they *would not* finish it, we put them away candy and all, throwing a piece of old carpet over them so as to close all openings left by raising the quilt enough to admit a couple of the candy bricks. We shall give the candy a good test at any rate; and while we are about it we have one more confession to make. We had

part of a barrel of clover honey that was "too thin," and to "fix it" we put it into the queen nursery which has proved a capital thing for melting candied honey. Well, it was evaporated down until it was very fair, but to get it *extra*, we put some more wood in the stove and left it for the night, thinking of course the hot water walls would prevent its burning. But alas, they didn't, for in the morning it was not only beautifully thick, but beautifully *dark*, and had a queer taste. Now we do hate to have things like this standing round, and almost before we thought, we fed it all—about 50 lbs.—to a dozen strong stocks, and even if it was so thick, we fear it will be the death of them as it was fed so late. This isn't all either, our confectioner made one lot of "dark" candy, and a stock that had some of this seems to be dying; if burnt candy will kill bees perhaps we can make the experiment as well as anyone.

We are trying five hives in the open air: the Quinby hive which contains about the best colony in the apiary, and would winter well without their chaff or anything else; the Standard hive, which has two colonies in it; the one with the burnt candy, and two more fair stocks to test the advantage of a close hive compared with an open one. One of them is to be tucked up snugly with a quilt, and the other is to be put on eight combs in the centre of a two story L. hive with nothing over or around them, except the cover to keep off rain. Both are carefully weighed and neither have been "tinkered" with late feeding. Double walls and chaff and straw packing have been so much extolled, we wish to try the opposite—no protection at all.

If some plan were devised for converting sugar into candy cheaply, as we stated in Prob. 1, we now feel sure that bee-feeders of every description would forever go into oblivion. You can feed at any time, in the middle of a summer's day—telling the robbers to load up at their own pleasure—or in midwinter at midnight, with no fear of consequences of any kind. If it could only be sold at the price of sugar, what a boon it would be to our readers. See if we do not manage it during 1876.

"SHE WILL BE HERE TO-DAY?"

EDITOR GLEANINGS:—For the amusement of your readers, I copy a rhyming epistle just rec'd from a friend. It explains itself—but I will add that for months "our bees," for one reason and another, had been my sole excuse for postponing a long promised visit.

CYLA LINSWICK.

My eyes have grown big,
And my ears have grown long.
Watching and listening for you;
Every morning I say,
"She will be here to-day!"
But the prophecy never came true.

Then I think of your bees,
Round the dry, leafless trees,
And I think, as I fancy them humming,
That the day may be warm,
And the rascals will swarm,
Just enough to prevent you from coming.

So, bereft of all hope,
I've sat down to mope,
Not a grin of good humor at hand;
And wishing all bees
(More especially these.)
Were safe in the "far better land."

Nov 2, '75.

Yours crossly!! M — L —.

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OUR HOMES.

BY A. I. ROOT.

INTRODUCTORY.

This will look a little bit eccentric, dear friends, I fear, and for fear you may think I am getting out of my proper domain, or that I am going to trespass on your good nature with some of my new notions, I shall make haste to assure you that this and the next leaf are not really a part of GLEANINGS; they are thrown in as it were—do not cost you anything, and very likely will not be worth anything, at any rate you are to be judge and jury. May I ask you, in any event to please be lenient? The work will cost me considerable time as well as money, and—now really I don't know whether to say I am fortunate or unfortunate, in having little to spare of either. Do you not sometimes think it a misfortune for a person to have been born wealthy? Have not the great majority of our really useful people of either sex, had their powers developed by stern necessity? Now perhaps I can get started best by telling what I intend trying to do in a sort of

PREFACE.

During Mr. Langstroth's visit last spring, we had as you know, many very long talks; and he was in the habit of pretty severely criticising some of my work about the Apiary, perhaps to draw out my reasons, etc., and at one time he asked me if I thought the bees would gather any more honey for having their hives arranged hexagonally, in the form of the cells of the honey combs, etc. Of course I replied that I did not, and then I tried to explain how I had studied to arrange it all to save the time of the apiarist, that when we began to count our hives by the hundred, every unnecessary motion was a decided expense, and that in the present age, time, as well as *honey*, was money and that it was as good economy to endeavor to save the one, as the other. To illustrate, I spoke of the way in which many homes were arranged, how the patient house-keeper was often obliged to go several rods in one direction for fuel, and perhaps nearly as far in another for water, very likely lifting both up inconvenient steps, having unhandy cellars, pantries, etc., and so on without end. "Now," said I to Mr. L., "ought we not to be very careful, that we who have taken upon ourselves the responsibility

of teachers, set a good example before our pupils, and try not to fall into the errors mentioned above, in the arrangement of our Apiaries, honey houses, etc.?"—I wish I could repeat exactly his reply; it was to the effect that he who should revolutionize the kitchens, pantries, cellars, woodpiles, wells, etc., etc. of our land, and in short make it a study to shorten, simplify and classify woman's work, would be more of a benefactor to our nation than—than—well, really, I cannot remember what he did say, but at all events he wound up by declaring that your humble servant was equal to, at least making an attempt in that direction. The result is, that here he sits—with a Type-writer and lots of blank paper—lots of good will toward you all, health and energy, but with far too little general knowledge of humanity, and perhaps a lack of discretion in properly directing what little he has. Do you remember our text of last month in regard to what is said about being faithful with the few talents that God has given us?

CHAPTER I.

"Be it ever so humble, there's no place like home."

IF I should ask you if you knew of homes that were not pleasant, you would doubtless say you did, that you knew of many, and should I further ask why they were so, you would perhaps proceed to detail very volubly just how so and so do not do as they should. This may be all very well, if in detailing the circumstances we see their errors in a way that will enable us to avoid falling into the same, or similar ones. Is your home a happy one? Is it so pleasant that you prefer to spend an evening there to any other place? Of course I do not know to whom I am talking, nor of the varied circumstances by which you are surrounded, yet I feel that there is a broad field for earnest work, in almost every household. Now before I go farther, I really feel that I must go over at length, in fact at considerable length, a subject that may be considered impertinent or perhaps intrusive, by some of our readers. If we were going to build a honey house we should first need a good foundation, and as many barrels of honey are very heavy, we should need an extremely *good* foundation. It is just so with our homes; a nice pump right in the kitchen close by the stove, would be a pretty "heavy" expense, and to advise everybody to get one,—if I were so fortunate as to secure attention,—might make a domestic "jar," or at least result in a downright refusal to entertain any proposal resulting in any such extravagance, whereas my real purpose is to consider how the expenses of this model home may be lessened, and not increased. The principal idea is to get every member of the household to help, to enlist their hearty co-operation, not only the children—clear down to the baby, but in a certain way the cat and dog also, and in short every bit of animated nature about the premises. I am not

speaking of imaginary things, I assure you, for there is one home that I have recently visited, from which I shall have to draw largely, before I get through, and I earnestly hope I may be able to show you the spirit of it, if nothing more. When I say that the first stone of the foundation of all our work is to be the most perfect good nature on all sides, many of you may say that your homes possess it already, because you never have any downright quarrels. This is all very good, but is not sufficient for the foundation *we* want. To illustrate:

I passed a couple of days in a very pleasant family, recently, and had been talking on this same point. Husband, wife, and four pretty, well behaved children, seemed to constitute almost a model household. Well, on Sabbath afternoon, I—it may be *too* earnestly—urged that we should attend a Bible class, in charge of a lady who was doing a great work of reformation in their town. The husband kindly offered to stay and take charge of their four months old little one, and the consequence was that almost before we knew it, two hours had passed. As we neared their home, our animated talk in regard to what we had witnessed, was interrupted by cries of the baby which evidently touched the mother's heart at once.

"Why my dear husband! how long has baby been crying in this way?"

"She commenced shortly after you left."

"And you have allowed her to cry all this time?"

"How could I help it? I did everything I could think of; didn't expect you would stay so *very* long."

"I declare! this is always just the way if I go out and leave you with the baby."

That was all; it was only a very little thing but both looked pained and unhappy. This wore off after a time, and both were as pleasant as usual; perfectly right, perhaps you will say, such *little* things are not worth taking up and noticing again, but I cannot feel that it is right. It seems to me that husbands and wives—I would like to say, or anybody else, but they don't care so much for each other, and are not so easily touched,—should never speak to each other in this way, or at least if they do, they should acknowledge their error as soon as their stubborn natures will come into subjection. If you are tempted to think this all trifling, remember who it is that has said, "he that ruleth himself is greater than he that taketh a city." In the evening before retiring I ventured to suggest that the speech was hardly a kind one, and I recalled it to mind.

"But it is the truth; it *is* just the way when I leave him with the baby!"

Every time I repeat the little circumstance in the presence of mothers, they seem with one accord to agree that she was nearly if not quite, justified in speaking as she did. Now perhaps I had better take care that I do not become dictatorial, or get into argument, for argument so often results only in strengthening both parties in error, that I earnestly hope I may avoid it. I also would avoid any lingering disposition to excuse my own sex. Granting that he had been very heartless in allowing the baby to cry nearly two hours,

what was the very best thing to do under the circumstances? or rather, what is best to do under all circumstances where we are likely to feel the least disposition to tell people wherein they have been wrong while we have been right, and to go even further, any disposition to complain of anybody or anything in a fretful, faultfinding way, *whatever* the provocation may have been? Is it not possible to have such perfect command over ourselves that instead of feeling the slightest disposition to retaliate, we can coolly consider how best any bad matter may be remedied, and at the same time make the author of the mischief a better man or woman, as the case may be? A great part of the world prides itself on remembering a favor, and on being fair and liberal with those who have shown a similar spirit, but in our model household we wish each member to emphatically bear in mind the glorious doctrine of returning good for evil, and that a blessing follows from applying it, in the most trivial actions as well as the greater affairs of life. In regard to the baby I would suggest that as soon as the state of affairs was seen, the mother should at once assume all the blame, if any blame there was, and mildly apologise to the troubled husband for her protracted stay; this would have at once brought out his better self, even had he performed his duties indifferently; and by the way, in no manner can a parent so well show that he "ruleth himself," as by being at all times ready to take all the blame of any misunderstanding. Show that your shoulders are broad, and that you can bear to be blamed for that which you have not done, and above all things, do not fall into the cowardly habit of arguing over "whose fault it was," in the little things that *will* continually go wrong. Careful investigation of the case in question revealed the fact that the tube of the baby's nursing-bottle was of an inferior quality of rubber, and had become so softened by the milk as to cause the sides to adhere together, and so the "precious little darling" had perhaps tugged away at it until long after forbearance had ceased to be a virtue, and then it had simply vented its righteous indignation toward all modern innovations of whatever nature, that stood in the way of supplying even such a little speck of humanity with its needful nourishment. Its papa doubtless after having "interviewed" all the machinery to the best of his inexperienced judgment, concluded that it must be crying simply to have its mamma come home, a feeling in which he probably heartily joined at the time, and so both waited in—guess we'll say *impatience*, while the "long minutes" slowly dragged by. Had the makers of these rubber goods been faithful in little things, all this might have been avoided, and I confess we all indulged in some rather severe censures on the way things were made "only to sell," but in thinking of it since, I fear we did not do our duty. Manufacturers, jobbers, retailers, and business men generally, are fellow creatures, and are probably just as good, and just as conscientious as we are. Ask yourself if—when you are inclined to censure some one—you would do any better if you were in the same business or place. If you say you would, we must take it for granted that you are better

than people in general, and the conclusion is that we are all better than our neighbors. Ought we not to conclude that we are all only a fair average? I think it will be a much safer foundation for our work. After having had considerable experience in business with the jewelers of our land,—the trickiest set of men in the world, some may say,—I feel no hesitation in saying that our business men as a general thing, are very glad indeed to be told the faults of their wares, if it is only done in the proper spirit, especially those who have done a long and successful business. A person said to me a few days ago, in speaking of a brother in the church who is a jeweler,

"I will never enter his store again, he cheated me so abominably."

"Please don't say that, friend H., I really hope Mr. S. is a good christian, like yourself. Please tell me about it."

"Why he sold me these studs for solid gold."

"Well, are they not? they look nice."

"Oh yes; they wear bright, but see how they have blackened my linen shirt bosom."

The button holes were too large, and in slipping about they had marked the linen as with a lead pencil, and it was not until I had explained that even a gold coin would do the same, that I succeeded in convincing him that Mr. S. was honest, and even then he said he had become prejudiced against them and did not want to keep them. Is it not a sure indication that we are wrong whenever we, under any circumstances, feel like saying that we never want anything more to do with a fellow being? I feel very sure that the kindest thing you can do is to tell the dealer pleasantly just wherein his wares have disappointed his customers; he in turn can then tell the jobber in the same pleasant way where the mistakes are, and the jobber can talk over the matter with the manufacturer. Jobbers and manufacturers, and to a certain extent, dealers, seem to have discovered this great fundamental truth, and I have frequently known of their taking back damaged goods and smothering their indignation, in a way that was decidedly returning good for evil, even if the inspiring motive was only to avoid losing one, who was ordinarily a good customer. The consumer is really the one to decide how goods are to be made, and also has very much to say in regard to what prices shall be asked, but the whole matter can be, aye, and should be, conducted in the most friendly manner. Do not for an instant think of crowding your grocer or dry goods man "into a corner," for unless he is a much better Christian than yourself, he will surely retaliate, and then instead of having a friend to deal with you have in one sense an enemy. As quarrels are contagious in a neighborhood, so is peace making, and one peace maker may by force of example do more good in a community perhaps, than even the minister who occupies the pulpit on the Sabbath. Not that I would speak lightly of our sermons, but that they have been heard so often; many times actions will set people to thinking when talking will not stir them. Go help your minister in the way I have described.

Now tell your druggist that it is a bad thing to starve bees by having inefficient bee-feeders, and a *very serious* thing—at your house

—to have machinery for the babies that is liable to cut off their rations; and pleasantly tell him that if he has none better he may get you a *good* one at the first opportunity. A few complaints like this, and the manufacturer will soon do differently, especially after he has had to take back an invoice or two because they were badly made.

CHAPTER II.

"A penny saved, is two pence earned."—*Franklin*.

I suppose you have all heard the matter of buying the various family supplies at wholesale talked over, thereby saving the profits that your grocer must, conscientiously, charge to give him a fair and honest profit. You have doubtless heard enumerated how you might save the profits that go to the "middle men," might save the time it takes to go round and do the marketing, save the time occupied in making change, save the wrapping paper, etc., etc.,—get rich in fact, from the "pennies saved," that now are wasted. This reasoning is all good and sound I believe, and in fact I believe that humanity in general, admits it; but notwithstanding, very few indeed have put in practice and carried out this great plan of saving both time and money. A few went into it vehemently, even went so far as to inform their grocer that they were going to stand his extortionate prices no longer, they could buy as cheaply as he, and the like; did the grocers break down? Surely not. They kept along quietly in the good old way, and bye and bye their old customers came back and traded, in the good old way, and like the thousand and one reforms that come up daily, things soon went back in the same old ruts, wasteful though they were. Perhaps I should say *pretty nearly* the same old ruts, for such excitements do usually tend to work a slow change for the better. I am trying to lubricate the wheels a little, and see if I cannot accelerate the slow change. The greatest trouble in this matter of buying supplies to last a whole year, is—I have been told,—with the other sex. If you put a barrel of sugar in the pantry it don't hold out, as when bought in 2 lb. packages as fast as wanted; there is "lots of it," and where is the need of "scrimping?" Everything will be sweetened up as it should be; the children can have a lump, the baby a bigger one, and bless their dear generous hearts—babies and mothers too if you like—if there is a poor neighbor who has sugar neither by the pound or barrel, or one who never pays back when she borrows, from the store of plenty all are supplied until it is all out, and the hard working husband sees no other than the good old way of getting two pounds at a time, and keeping a constant check on extravagance, by grumbling every time he is told a supply is out. "Whatever *have* you done with so much sugar lately?" And he surveys a row of juvenile faces that, with the exception of the baby, deem it a duty to look guilty while enquiries are propounded as to what was done with the money he generously *gave them* a few days ago; and before you blame the poor man too much, let me suggest that he has learned by bitter experience that he *must* question clear down to the very last last ten cent scrip, as to where it

all went to. Where is the trouble? Trouble there is, for both parents look troubled and unhappy, the children look troubled, and perhaps the only glimpse of sunshine that is at this minute to be found in the household, comes from the baby. "Precious little darling!" she has confidence, perfect confidence in both papa and mamma, confidence in brothers and sisters, confidence in every body and every thing. Is not this confidence, this love and innocence, just what is wanted? To be sure these two parents love each other, but is there not danger of this love being covered up and forgotten in the mutual distrust that now seems to reign? He has no confidence in her ability to handle money judiciously, and she, feels indignant that he should seem to think it all *his* money. Have they not both worked for it? Has she not even worked *more* hours than he? Then why should it not be a partnership, why should he not tell her about his business as he would a friend of his own sex? Why should he not see that her hard and laborious life is all given toward one common object like his own, viz., a nice and pleasant home, and rearing their little family in such a way as to be good and useful citizens, if possible such as will be the pride of their country when they grow up?

It is an easy matter to tell how things are, to tell how they should be, and to tell what ought to be done; but is it not possible to make this woman careful, to cure this man of being stingy—I don't mean you dear reader; no, no, it is some one of your neighbors that you can think of—to make them mutually confide in and trust each other? I feel sure it can be done, with God's help I *know* it can be done; as greater things have been done in our dear little home, I feel sure they may be done in others. By bringing the proper forces to bear I feel as sure this woman can be induced to try to equal—nay, to excel her husband in economy, as that we can teach the blue eyed baby better, who is this minute pouring the blue whortleberry juice out of her sauce plate, all over her clean Sunday clothing that the ambitious mother has donned so as to have her all ready in time for church, and to win that proud smile from her papa when he sees her looking so like a very "pink of perfection." Do you wonder that the poor mother feels like giving up in despair, and just having a "big cry?" Can't babies be taught? Just you try them on some piece of mischief and see. "And am I to be taught like a baby?" says the indignant mother through her tears. "Except ye become as little children, etc." Oh! that we might consent to be as little children so far as touching our pride, is concerned, and that we might become humble enough to admit we are in the wrong, and thus get into a position capable of becoming higher, stronger, and nobler. Will you help? very well; we will commence with the baby. Tell her just what she has done, and how sorry mamma is that she has spoiled all her clean clothes, that poor mamma gets awful tired, etc., but make your sermons short and brief, for babies, and sometimes older people, cannot stand *long* sermons. Now tell the children you will show them a trick; place two clean tea-cups on a clean sheet of paper, fill one to the brim with water, and ask

if any one of the children can get the water all into the other cup without even so much as wetting the clean paper. When they get to work with their spoons, the baby will want to try it too. Give her two sauce plates and some water and tell her to be very careful not to spoil mamma's table cloth: when they can manipulate water carefully give them sauce or honey, bye and bye spill some honey on the bare table, and offer a premium to the one who will clean it all up quickest and neatest, always giving the baby a task equal to her ability. Now in your capacity of teacher you should be as careful about using an unkind word, or using the least bit of censure for awkwardness, as you would be in carrying a shovel of coals through a room where gunpowder was knee deep. You can wind up by telling them that mamma has ever so much hard work to do, and that all are going to help make it easier. Baby can be taught to pick up, and hang up things in their places—one of our little ones learned this so well that he would hang up every thing, even down to the shoes and stockings if they were left in his sight, and I verily believe he would have hung up the cups and saucers if he could have tied strings to them—the older ones can put in fuel, clear up every splinter and bit of litter, and the father can set an example for the rest of the household by cleaning his boots with the most scrupulous exactness before coming into the house, etc., etc., and really making it a business to help in every way, both by precept and example. Dare you urge that this takes too much time and is too much bother? Can you fail to see that this plan followed out, would give you a force of workers, cheerful and faithful ones, on the farm, in the garden, the fields, the barns, nay, in the store, the counting house, in our schools and even churches, of a kind that money cannot purchase; a kind of help that is more to be valued than pure gold? More than all, you are at the same time giving your children a part of their education that none but a parent can well give, and one that lies at the very foundation of a great and noble character. Are there ever children that cannot be interested in such duties? I think not if they are taken at an early age, and the parent is sufficiently interested in the work to devote to it all the energy that he does at times to other matters in life. Children can be taught to be neat and skilful, almost as easily as they can be taught mischief; and they can be taught to take pride in keeping their faces and clothing clean, being careful that they do not waste their food, being skilful in the use of their spoon, knife and fork, seeing that everything they have disarranged in their plays, be carefully put away, and so on almost without end. This too can be done in such a way as not to seem irksome to the dear little ones, by any clear, strong, faithful parent; one who perfectly "ruleth himself."

To be continued.

Now my dear friend if you are one of those people who like a bee-paper to be all bees and nothing else, all you have to do is to give these two leaves a twitch and they will come right out leaving nothing but GLEANINGS.

OUR HOMES.

BY A. I. ROOT.

CHAPTER III.

And the truth shall make you free.—John viii, 32.

There was once a boy who had an exceedingly bad temper; one of the lamentable kind that prompts its possessor to acts of unrestrained violence when thwarted in his wishes; and to such lengths did it carry him that his good mother told him she really feared he would come to some awful end if he were not restrained. He was ordinarily mild and tractable, and during his better moments she prevailed upon him to promise to go away by himself when angry. By good christian example and teaching, he was finally induced to retire to another room when feeling that he was losing self-control; and this he finally learned to do of his own accord, returning after having perfectly mastered himself, and announcing that he had left the "bad boy" in another room. As he grew older he went with his mother to the Sabbath School, and was taught good christian principles, but alas! as he came to maturer years, temptations came in other forms, and as time passed on he learned to think that his good, old mother, tho' honest in her belief, was rather behind the times, that the new revelations of science were destined to set aside old ideas, yet at the same time keep the morals of our people fully up to the old standard. And what seemed strangely inconsistent with this new doctrine, his old temper of childhood began to crop out: he became less kind as a husband and father in his own home, and as year after year passed by, those who knew him intimately were one after another obliged to give up, there seemed no hope as he day by day settled down into a hard, cold, unfeeling species of atheism, infidelity, and misanthropy. In vain did he in his better moments resolve that he would leave the "bad boy" as in childhood, and break loose from the vices that were becoming daily riveted more and more firmly, for he knew in his inmost self that soon his real character would begin to stand out unveiled to public gaze in all its deformity. At this time he was even quoted as one who was more upright and fair in his dealings than professed christians, but though dollars and cents may go a great way, they come far short of healing all the wrongs we may do a fellow mortal. Finally there came a time, at the last moment as it were, when this man sold himself, body and soul—all, everything; *not* to the evil one, but to his Maker. He put out his hand in perfect humility and helplessness, and promised perfect obedience, promised to consent to be led anywhere, or to go anywhere in a way that was as foreign to his old self, as almost anything you can imagine. Was he fettered? You may judge after having heard the following incident; in fact we have told this much of him just to get the following illustration: He now goes to all the prayer-meetings, his wife with him; but shortly after this change, she felt on one occasion that other urgent duties should excuse her, and sent him a pleasant note to that effect. He wrote back that he could not

think *any* duty should excuse one from such exercises, and intimated in something like his old manner of ruling, that he should expect her as usual. This is a trifle, a mere trifle, but our lives are made up of trifles, and well the evil one knows this. Perhaps he had been watching round for months to see where he might find one little loophole wherein he might venture to put a word. Now it has come, and he commences craftily: "If she can not do this little thing to help you along in the great sacrifice you have made, and principally for her sake too, why should *you* try so hard? I would *make* her go; I would show her the consequences of trifling in such a matter. If she does not come promptly at two o'clock, I would not go a step, it is her own doing." But says the poor victim:

"How can I ask my Heavenly Father—how about our evening devotions?"

"Let 'em all slide. You could have done it in your own strength all the time if you had only thought so." And humanity stops and listens while a whole troop, in fact legions of old temptations crowd in and cover him up almost, as the old life comes back, and the new peaceful one fades in the distance. Gone, all gone. "Stay! Father! help your poor, erring, stumbling child, take away that old wicked self! I will be good, I will obey, only give me back that new, bright life."

All is still; a still, small voice whispers, "Will you allow your wife to do as she thinks best?"

"Yes."

"Will you go to meeting without her?"

"Yes."

"You will not reproach or censure her by word or manner?"

As he promises do you wonder he feels that an angel stands over him? He is safe. A shadow approaches. He looks up and meets a smile that he used to dream of in years gone by. The same old pleasant voice says,

"Husband, shall we not go: it is just two."

"What a pleasant, pleasant world," he muses, as he goes along quietly thinking of the conflict that seemed to occupy hours, whereas it was probably only as many minutes. After the meeting she asks almost in alarm,

"Why who in this world was it you spoke of having been so angry at?"

"You."

"Me! why what ever *did* I do?"

"You spoke of not going to meeting."

"But you do not know what you are saying, you don't know how unreasonable you are."

And for an instant there seemed danger of an argument still; not long however, for the new power still hovered near, and presently he told her how lonely he had of late learned to feel when in church without her, but that he had just begun to see that it was his duty to let her decide in regard to such matters, for herself; he would be very glad to have her with him, but would consent pleasantly to let her decide, and would go cheerfully alone when advisable.

"Why bless your dear old heart! when you talk in that way I feel as if I could go through fire and water to please you."

Who do you suppose is ruler in that household now? Do you not think *your* wife or

husband would do much the same? And is that man now, fettered, or free, compared with his former condition?

I wish to narrate one more circumstance that occurred in this household shortly after. This individual had been in the habit of enforcing obedience in his family with the utmost severity, and as the children inherited a disposition much like his own, each one of the little ones sooner or later, had to have a regular "breaking" of their stubborn wills; all very proper and correct, had he only administered the correction in a spirit of kindness and with an entire absence of temper or irritation of any kind. As the disposition of his wife was one of those which in childhood seldom if ever needed correction, she learned to fear a collision between him and the children, and it may be on that account screened them perhaps at times when they really needed punishment. At the time of which we are writing, an untamed two-year-old had been for some time getting daily more and more headstrong in her independent way of ordering the different members of the household about, and he had been feeling that his duty as a parent demanded that her spirit be—not broken, but guided into a proper and healthful channel. Finally in her mother's absence, she one day demanded something that it was not proper for her to have, and he, not knowing the extent to which she had been indulged to keep peace, took her by the hand and told her gently that she must obey. This only produced struggles and screams, and he was obliged to take her by main strength into an apartment by herself, and even then she manifested her defiance of his authority by persisting in the very acts that had been forbidden. Punishment seemed to have no effect, but what would be the result of allowing her to think herself conqueror? He talked long and earnestly with her, and finally told her that he must punish her until she would submit; this he did, and she at length put her little hand in his, and promised to submit to his authority for all time to come. In less than a half hour the two, with kind and pleasant feelings toward each other, went in quest of "mamma." All passed pleasantly until evening; when the child was undressed it was discovered that the severity of her punishment was such that her tender flesh was blistered. The mother protested that such punishment was never called for, that she would never consent to it, and that she should feel it a duty to keep the delinquencies of the children hidden from the father so long as he persisted in such extreme views of family government. Talking the matter over did no good; the parents clearly could not agree. Our friend, after a little reflection, decided that such a state of affairs was not to be thought of for an instant, and as the only alternative, gave up and promised his wife that he would punish no more without her full consent and approval, and to be sure to get on a safe and true ground, they both knelt and asked their Heavenly Father to guide them in the care of the little treasures that he had entrusted to their keeping. Do you wonder that at this crisis her hand stole into his as in years gone by, with the remark that so long as he looked to such a source for guidance, she

would never again doubt his judgment, and that if it nearly killed her, she would, with all her power, teach that papa was right, and always knew best? Do you see how the fetters have fallen, and how each member, from papa to the little one, begins to feel the freedom that comes from perfect obedience? Of course the rebellious mood will come again now and then, but a single look from papa reminds her of the promise that even in *her* little heart is held sacred, and I need hardly say that a closer friendship now binds the two than ever existed before.

And the rain descended, and the floods came, and the winds blew, and beat upon that house; and it fell not; for it was founded on a rock.—Mat. vii, 25.

CHAPTER IV.

"As the twig is bent the tree is inclined."

"Take care! don't touch it, it will bite," said a lady to her child who had approached a pretty flower in a neighbor's front yard, probably with the intention of picking it. Of course no child wishes to be bitten by any of the wonderful things that it runs across, and starting in affright it left the flower. What an economical plan of getting along with children that are in the least disposed to be unruly! Again, a young mother was visiting with a wee, little one, who took a great fancy to a collection of curious buttons, and when it was time to go, the bag was hugged up tightly in her little arms in a way that spoke as plainly of her intentions, as if she had been old enough to say it in words. The young mother took in the condition of affairs at once, and with rare tact opened her basket and induced the little one to deposit her treasure therein, giving her a fair promise that it should be taken home. With all a child's full confidence the bag was handed over at once, while the skilful mother slipped it in and then out so adroitly that the little one trudged along in blissful ignorance of the fraud that had been perpetrated on her confiding little nature.

About fifteen years ago a mother told her boy baby that unless he stopped crying she would throw him out in the street and let the "black man" get him. Within a few days I have been told that this same boy had deceived his mother for nearly a whole year in regard to his habit of using tobacco. O ye mothers, how can you find it in your hearts to deceive these little ones who look up to you for an example, with such pleading, innocent eyes? Can you wonder, or blame your children for learning at an early age to prevaricate and deceive their parents in turn, when any particularly selfish end is to be gained thereby?

"When you have grown up and have children of your own," said the lady last mentioned, "you will find that you will be glad to get along with them the easiest way you can."

Just exactly, and now if you will excuse the liberty, I will suggest what I think the *very easiest* way to "get along" with children. We are not to wait until the child is of a certain age, for it to become capable of receiving lessons of obedience, but to bear in mind that as soon as the little one is old enough to recognize its parents by that responsive smile, it has begun to take its first lessons; and now

Beware that it hears no unkind word, and sees no act that you would not have it copy. In training parrots, the greatest care is observed that they hear no obscenity or profanity, and we certainly can be as careful of these little embryo human beings. Not that I expect parents are going to indulge in these, but I do fear they sometimes use little bits of deception which are taken up by the child long before they are aware of it. Those who have had the care and training of colts know how easily they take in impressions; in fact I have likened them to *soft wax* in this respect. They will remember for months, a spot where they have been fed, or where their master has stopped for only a few minutes, during the first few days after they have been taken from their native fields and put in harness. They will learn a new trick in a few minutes, and will remember it for years. You can very easily teach them to start without telling, the minute you set foot on the vehicle, or you can by taking time and pains, teach them never to start until the word is given, even if your child should climb in and get hold of the reins, jump on the seats, etc. You can also teach them to stop promptly when told, or that they must push ahead until you pull back with all your strength, and shout at the top of your voice. The colt means well,—so do the children,—it is all your own fault if you allow them to form disagreeable or dangerous habits, instead of desirable ones, when they are so very ready to copy everything they see.

In Abbott's "Rollo Books" a set of maxims was framed and hung up in the schoolroom by "Beechnut." They were as follows:

"When you refuse, refuse finally.

When you consent, consent cordially.

When you punish, punish good naturedly.

Commend often, but never scold."

To the above I would beg leave to add:

Never give a command, which it is out of your power to enforce, to a child that has not fully learned to obey.

I once had a high-strung colt that persisted in backing and going ahead while I was talking with a neighbor. At first I was somewhat out of patience, and inclined to be harsh, but on a second thought I moved the seat back and gathered the lines ready for a tussle; then ordered her to stand still. As soon as she disobeyed she was struck one smart blow; of course she reared and plunged, and it was well that I was thus prepared, but when she saw that her driver had no spite to vent in unkind words or further blows, her anger that made her quiver for a few minutes soon passed away, and she never repeated the offence afterward.

If a child is screaming at the top of his voice, it is injudicious to order him to stop instantly, because you cannot compel obedience very well in case he is headstrong, but if he is crying for the looking glass you can tell him decidedly that he cannot have it, for there you are master. If he is in mischief and you call him to you, he may come and he may not; if at the time you make the command you resolve that unless he obeys promptly you will go and bring him, he will probably obey, because he will read decision in your eye and tone. If you first call his attention pleasantly, and then firmly and clearly give the command,

he will obey with no feeling that you are unjust and tyrannical, but it very much depends on your previous habits. If a child has been accustomed to feeling that it would be as idle to cry for it to stop raining, as to cry for his parent to break his word, there is very little danger of disobedience. On the other hand the parent should be so careful to promptly keep all his promises, that his child will have the same faith in them, as he has that the sun will rise in the morning.

"What, am I to take my hands out of the dough and let my bread spoil, just because that little upstart has taken advantage of the situation to show a little defiance of my authority?"

I think it would be better to let not only the bread, but the whole contents of the kitchen, nay, the house itself spoil, than let the child get an idea that it might evade parental authority with impunity. A bright little boy in our vicinity had not been made to mind—his parents had no faculty of governing, it was said. He grew older, and on his way to school would wade in the puddles when they were covered with thin ice. He took a severe cold and was commanded to keep entirely away from the water. He had never obeyed, why should he now? He did not, but went straight to the forbidden ice, and from there to his grave in a very few hours. The mother was almost crazed with grief.

CHAPTER V.

FOOD.

We have in our home oft-times discussed the comparative expense of the different articles of food, especially when there seemed unusual need of reducing expenses, and the difficulty of getting at any really definite figures in the matter finally resulted in the following experiments:

For breakfast on the first day of Nov., I ate five Graham gems, these with one cent's worth of butter cost three cents. So far as the gems were concerned my hunger was perfectly satiated, but I could have with ease eaten, after this, a piece of pie and perhaps cake, may be an apple or bunch of grapes also; but as I was "in pursuit of science" and bent on determining just how much food was really needed, I ate nothing more. Somewhat to my surprise I *did not* get hungry before noon, but on the contrary felt unusually well. At dinner I ate $\frac{1}{4}$ pound of rice, cost three cents, with 1 ounce each of sugar and butter, which made a very good meal for 5 cents; as I used very few dishes for this simple repast, the labor of preparing the meal was also economized. Next meal was $\frac{1}{4}$ pound corn meal and $\frac{1}{2}$ pint milk, cost 3 cents.

Fourth meal, $\frac{1}{4}$ pint of beans, cost less than *one-half cent*; this amount seemed so ridiculously small that I spent the afternoon in pretty severe out-door labor to see if it were really possible one could live on such an insignificant expense. To my surprise I felt unusually well, and yet this vegetable was one that always disagreed with me when eaten as usual, with a full meal of other things. In all these experiments I had taken unusual pains to masticate my food, and as a result ate slowly.

Fifth meal; beef steak and pork sausage, one pound, cost 16 cts; I should have eaten the whole with ease had not Blue Eyes petitioned for a part of "papa's supper," and so my supper cost 14 cents.

As the programme was, that I was to have what I liked, providing I could give the cost of it, I chose next ginger snaps, of which I am very fond, and cheese; as I had eaten no fruit, I chose a good glass of lemonade at the close of the meal, which cost 1 cent, the cheese 2 cts. and the snaps 8 cents—11 cents in all.

Seventh meal; $1\frac{1}{4}$ pounds of potatoes roasted in the coals, cost less than $\frac{1}{2}$ cent, and the milk eaten with them brought it up to 2 cents, but as I got hungry before supper I concluded that potatoes would not compare with the grains and beans.

Eighth meal; felt like having some more meat, and to try something a little cheaper, I paid 25 cents for a soup bone; this gave a very good meal for about 4 cents.

Ninth meal; $\frac{1}{2}$ pound oat meal, and a most delicious meal it was, for about 3 cents.

Tenth meal; one gill of whole corn soaked in water 16 hours, the hull taken off in the usual way with a lye made of ashes, and corn boiled until thoroughly cooked, when eaten slowly with a little salt, made a good meal for only $\frac{1}{4}$ of a cent.

Eleventh meal; and the most delicious meal of all, was simply whole clean wheat boiled until well cooked and served with butter and clover honey. I ate about $\frac{3}{4}$ of a cent's worth, and about 2 cent's worth of butter and honey, but ate more than I needed.

Twelfth meal; oysters. Oysters cost 10 cts., milk 1c and crackers $2\frac{1}{2}$; whole expense $13\frac{1}{2}$ cents.

Thirteenth meal; eggs roasted on the coals, *a la* boyhood days. This experiment was a failure from the fact that we only roasted five and after eating these were so hungry that we ate $\frac{1}{4}$ of a grape pudding and a large slice of home made ginger bread—home made costs only 5 cents per pound, while the snaps are 18 at the grocers. Eggs would be quite expensive for a full meal at present rates, 22 cents, and we should probably want 8 or 10, to be equivalent to $\frac{1}{2}$ pound of wheat.

In the above experiments it will be observed that we have paid little or no attention to sanitary matters, and we should be very sorry to discourage the use of meat, having at one time regained health by an exclusive meat diet of many weeks, but there is one very important fact elucidated, viz., that a more extensive use of our grains in their unground and unbolted state would not only be a great saving of money, but a positive gain in health. As an illustration, a pound of wheat costs 2 cents, and is worth more in every way than a pound of flour that costs 4 cents, or a pound of bread that costs from 8 to 10. Cracked wheat, it is true, can be bought of the grocers, but as it must inevitably pass through several hands before it gets to the consumer, they really cannot furnish for much less than 6 or 8 cents what they pay the farmer 2 for. Much the same might be said of all our grains, and if you have never tried cooking them whole in the way we have mentioned, it may be worth while to try the experiment. If they are sim-

ly broken in two, say in a common coffee mill, they will cook more quickly, and mills are now in the market for this purpose, in size and capacity from a coffee mill all the way up.

The great strides that are now being made in science and the arts and industries, are by a kind of Yankee faculty of cutting 'cross lots, of producing just as good or even a better article, with less labor and machinery, less complication, and fewer hands employed. Suppose we had a job of work to do on the opposite side of a stream; we might go down stream a mile to get to a bridge, and then come back a mile on the other side, or, we might roll up our trousers and splash through, and have the work a good way along in the time we would be reaching the bridge. Some might object that the latter is an undignified way, but if it is the only road to honest independence, we would advise taking it by all means. We can splash through the water on a small scale, by taking the coffee mill some evening and seeing how much money we can make by grinding wheat at two cents per pound, for even when ground very coarsely it can be made into most excellent bread. You can splash through the water again by purchasing meat that is good and wholesome, at 4 cents per pound instead of 16. And again, by paying cash for everything you buy and insisting that you have it at the very lowest *cash* figure. Haven't you the cash on hand? Reduce your expenses so that you can lay up half of what you have formerly paid out for your table, in the way I have mentioned, and before you are frightened for fear such a course may look undignified, reflect that some of the finest minds the world has ever produced have been obliged to study this matter as one of the fine arts—how to live cheaply.

We have plenty of men in our cities, who make it a business to help those who are not afraid to splash through the water, by offering the staple commodities of life at very close figures indeed, but you must *pay cash*, for these men figure on so small a profit that it is entirely out of the question to add a per cent to cover the losses on bad customers, as most of our country merchants and grocers are obliged to do, and for that matter you can almost always make an arrangement with your own grocer, if you will tell him that his money is always ready, or better still if he is trusty, give him the money to get what you want when he goes to the city. If you have *always* the money in your pocket, you need not fear but that you will always find him accommodating.

From quotations, from W. P. Southworth & Co., 116 Ontario St., Cleveland, O., I glean the following:

Standard A, coffee sugar by the barrel, 10 $\frac{1}{2}$ cents, retails for 12 $\frac{1}{2}$. Golden syrup in 5 lb. kegs, 65 cents; retails at \$1.00. Cod-fish, 25 lbs., 5 $\frac{1}{4}$ cents; retails at 8 cents. German erasive soap, by the box, 43 $\frac{3}{4}$ cents; retails at 8 cents. Soda and saleratus, 10 lb. lots, 7 cents; retails at 10 cents. Oat meal and barley in 25 lb. lots, 5 and 7 cents; retails for 8 and 10. Corn starch in 49 lb. boxes, 10 cents; retails at 15. Rice, 10 lb. lots, 83 $\frac{1}{2}$; retails for 12.

I have only selected a few of the necessities as samples; tea, coffee and tobacco, would certainly be out of place in a home where economy

was to be made one of the fine arts, it seems to me, to say nothing of other objections. The two former may be necessary for old people who have been long accustomed to their use, but they certainly are not in *our* home. Where it is an object to lessen the labor of the housekeeper, canned goods are a great convenience, and we mention a few that have given us much satisfaction. The prices are what we have paid, when bought in 2 lb. cans by the dozen.

Blackberries 11 cents, strawberries 14, whorberries 14; all retail for 25. Tomatoes, 3 lb. cans, 12½c; retail at 25. Lobsters, coye oysters, and salmon, 2 lb. cans, 23, 15, and 25 cts. respectively; and we pay at retail from 30 to 40 cts. per can. The salmon has now advanced in price, but at the price we bought, it was very cheap meat indeed, and it has been placed at the head of the list of brain producing foods. The convenience of canned goods for getting up a meal on short notice can hardly be estimated, and it seems to me there is a great opening for an immense industry in raising and putting up canned vegetables. We can not buy a 2 lb. can of corn for less than 18 cts. and it retails for from 25 to 30, yet hard corn can be raised for 2 cents per lb. Green corn is a national dish and the best varieties of our late improved sugar corn—by the way the best we ever ate was at Mr. H. Palmers, Hart, Oceana Co., Mich., and if he will put up some packages of the seed for our readers, we will give him an advertisement free; if his wife will give us the receipt for cooking it, we will send her a copy of "OUR HOMES" for next year, and if her sisters in other states will also send in whatever they have to aid us in the work we have undertaken, we shall think it a rare favor.

I once heard of a minister who lived near his church and had a fine cabbage patch. On one Sabbath in the midst of his sermon he espied a hungry cow making sad havoc amid his vegetable treasures, and on the impulse of the moment he deserted the pulpit to save them from impending ruin. On his return he was at a loss to find the broken thread of his discourse, and in despair turned to his wife.

"Betsey where was I last?"

"Indeed I can't say, unless it was chasing back and forth among the cabbages."

Well I left off some where among the sugar corn, but I can't say exactly where unless it was trying to induce some of our young men to go into the business of supplying our people with a nice article of green corn any day in the year, and at a price within the reach of all. You can easily figure the cost of the corn, and cans holding 2 lbs. will cost less than 4 cents. Is it possible there is one of my readers who has nothing to do? We certainly cannot have a pleasant home unless the members are all kept busy, and as "what to do" is quite a broad subject, we will have to take a chapter or two to consider just what one can go right to work at without capital and in almost any locality. For the present we may take a brief view of some points.

Milk passes our door daily on its way to the cheese factory where it is sold for 2 cts. per qt; our milk-man charges 7 and we do not blame him, for he can not well carry it around at a cheaper rate. In our experiments we found

milk rather expensive food, yet we cannot *think* of any substitute; can not some one tell us how we may buy our year's supply at one time, paying only \$6.00 where we now pay \$24.00? We want some way of cutting across lots. The same thing occurs in nearly all kinds of food; if it could only be kept right at hand in some convenient shape ready for use, so as to save the time occupied in going to market over and over and over again for the same thing. Again, a great variety of foods made from corn, wheat, and the other grains, are offered for sale in cities, but an examination of their price lists shows that we must pay them several hundred per cent profit for working over the products of our own farms. Not that we think it too much, but can not we cut across lots again and save freights and profits? You have all seen it well illustrated in the honey trade. The worst trouble perhaps is that only in the cities do they understand how to put up goods neatly, and tastily. Your grocer will be glad to buy of you if you will bring him salable goods, and he will sell your goods too, for a very small commission. There are millions of your fellows wanting foods cheaply and they are at present paying ruinously high prices for them. Four hours ago I stepped into a neighbor's grocery and selected canned goods for my dinner. I ate a full 40 cents worth and yet was no better satisfied than with my 3 cent's worth of wheat, butter and honey.

Nov. 25th—Says the *Scientific American* of Nov. 20th:

Nearly all the Graham flour sold in New York, and perhaps in other large cities, is bogus. It is made by mixing the coarsest of the bran with either spoiled flour or with white flour that may not be spoiled. This flour is made into bread by bakers and sold to dyspeptics who think it wholesome, but it is a poor substitute for the genuine article. Those who want a genuine article must either make it with a home mill, or have it made by an honest miller.

For the past two weeks I have from choice been living mostly on bread and milk, and baked apples; a glass of milk, a slice of brown bread and an apple, costs but 3 or 4 cents, and yet I do not think that ever before in life have I felt so well and so full of vigor as on this simple diet. It is true that after eating these I could easily eat as much more pie, cake, fruit etc., but to feel *really well*, I must get right up from the table and eat nothing at all until the next meal. It is said that such have been the habits and diet, or similar ones, of those who have lived to a great age, and while I think of it I fear I should get lonely if I should live to be 140 or thereabout, and at such a time the sight of an old "bee-friend" would be especially refreshing. Seriously, is it not a fact that a great load of intemperance rests on the shoulders of a class of our people who never think of going near a grog shop? Are not the great cures that have been accomplished by special dieting, more directly the result of the abstinence which of necessity follows?

We had been having a long dusty ride, and the train stopped before a very pleasant cool looking room, where the people all seemed to be getting out for some purpose. I followed and was soon seated with the rest; among the many good things that were spread on the table before us I particularly remember a large

dish of whortleberries and milk that I was enjoying hugely, when a pleasant faced fellow interrupted by extending his hand and mildly asking for a half dollar. Now I have got just to the whortleberries—perhaps it is “boiled wheat” in our case, at any rate it costs nothing for what you have had, but if I give you with each number of GLEANINGS for 1876 one of these HOME PAPERS I shall want about 2 cts. each, or 25 cts. for the whole year. In other words

GLEANINGS FOR 1876 WILL BE \$1.00
Three copies, \$2.50; five, \$3.75; ten, \$6.00;
and we will send as a premium to all who subscribe before Jan. 1st,

LITHOGRAPH OF THE APIARY,

PHOTO OF THE HOUSE APIARY, or photo of
“NOVICE AND BLUE EYES,” your choice of
the three.

GLEANINGS alone at old prices, or OUR HOMES alone for 25 cents. Postage prepaid on all. Those who have paid 75c can have any one of the premiums if 25c is sent for OUR HOMES, before Jan. 1st; after that date, two names will be required at \$1.00 each for any premium. As we have been blamed for sending the same a second time, no present will be sent unless it is asked for.

Dear friends, my work on Vol. III, is done, and so far as I am concerned, it has been a very pleasant work indeed. Your letters have cheered me more than you can think, and I only regret that it has been utterly impossible for me to reply to them individually in the same kind and friendly spirit in which they were written. Whatever GLEANINGS has accomplished, much of the credit has been due to the many kind friends who have aided by frequent hints, and many of them have been only brief notes on postals. May God's blessing rest on all your homes, and may each individual member feel an earnest desire to walk in the straight path of duty. May prosperity be the reward of all faithful labor, whether it be in the apiary, on the farm, in the shops, stores, offices, or wherever in life these lines may chance to greet you.

A. I. Root.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT.

EDITOR AND PROPRIETOR.

MEDINA, OHIO.

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MEDINA, DEC. 1, 1875.

To this end was I born, and for this cause came I into the world, that I should bear witness unto the truth.—John 18, 37.

Mr. HARRISON will be ready to fill orders for queens, as soon as Feb. Send for his circular.

NEW subscribers for OUR HOMES for 1876, will receive the first two papers free.

A VERY good receipt for the candy we have mentioned, is found on page 22, Vol. I. We hope in our next to be able to give a full account of the implements needed to make it cheaply for an apiary.

FULL directions for making comb foundations will be given next month, also, prices of the dies for stamping the wax sheets, and instructions to those who wish to make their own dies. This will be nice work for the winter.

As our call for Jan. No's. only resulted in bringing three copies—flattering is it not that nobody will sell them?—we shall have to offer Vol. III, without it we fear. Therefore we will furnish Vol's I, II, and III, less Jan. No. of Vol. II, for \$2.50, or the whole with the best binder for \$3.00.

“INJURIOUS Insects of Michigan,” by Prof. Cook, of the Agricultural College, is a pamphlet of 48 pages, finely illustrated. It will be mailed on receipt of two 3 cent stamps and is really worth as many dollars if well studied. Address Prof. A. J. Cook, Lansing, Michigan.

THE North American Bee-Keepers' Society will meet at Toledo, O., Dec. 1st. We can not conscientiously advise our readers to invest money in going long distances to these conventions, with the hope that it will prove a profitable investment; but where they are held in their own county, should say attend them by all means.

L. C. ROOT's article on preparing bees for winter, in the Nov. No. of *Am. Agriculturist*, is probably as safe to follow as any thing we have on the subject. He gives the preference to cellars under a room wherein a fire is kept constantly during the winter. This enables us to remove all accumulation of bad air and dampness without the possibility of mistake or failure, on the plan given on page 169, Vol. II.

GLEANINGS, and in fact all the Bee Journals of America, can be sent to Great Britain, for 24 cents per year extra. All the books advertised in our list will be sent, free of postage, at the same rate as in our own country; the same applies to the back Volumes of GLEANINGS. For the benefit of our English friends, we will say that 1£ English money is worth, at present to us, \$5.50, and that \$1.00 our money will be equivalent to about 2s. 8d.

As foreign postage stamps are of little or no value to us, and our own the same to our friends over the water, we think we can all be excused for not enclosing stamp for reply. Postal cards are much the cheapest medium of communication, and if we waive all ceremony and “pitch right into business,” will contain quite a letter, and they only require an extra one cent stamp. We will answer all inquiries and pay all postage, if our friends will excuse the “postals,” and our brevity.

WE have been taken to task for saying that our standard works are all behind the times; but really, we do not know how we can recall it, until some edition is before the public that takes some cognizance of the extractor; one that has been published since we have learned to get 500 lbs. from a single hive, and to market our honey by the ton; and above all, to make some mention of our wintering troubles. As it is, we feel it a duty to direct a beginner to our Journals, rather than to any of the bee books.

If you wish your paper continued without interruption, please remit for next year shortly after this reaches you. As we do not wish to intrude it on any

one not wanting it, we shall take it for granted that all who do not remit before Jan. 1st, wish it discontinued, and no one need ever take the trouble to write us if they wish it stopped. The same with OUR HOMES; you can all tell by this time whether you will desire it for next year; if you do, remit the extra 25 cents, before Jan. 1st, and tell us what present you wish.

A PRETTY little volume, entitled "A Manual of Bee-Keeping," by John Hunter, England, has just been issued. Although it is in many respects not quite adapted to the habits and customs of "Young America," yet we have been very much pleased indeed with it, and take pleasure in adding it to our book list. The chapter on making comb foundations will be read with much interest, as also the one on making candy—"Barley sugar"—our English cousins are pleased to term it. By the way friend Hunter says that for guide combs for boxes, or for any place where either drone or worker comb will do, sheets of plain unembossed wax are just as good. Who has tried this? We will mail the book for \$1.50.

ALTHOUGH reports in general are strongly in favor of in-door wintering, in our own locality the matter has many exceptions. A friend has just been in, who keeps from 20 to 30 always on their summer stands, and uses neither quilt nor honey board. The upper story is their only protection and as these are by no means tight, they have ventilation until they can almost see the stars twinkle overhead on a frosty winter's night. Do they die? Not at all, and yet his neighbors who have kept theirs in their nice cellars and bee houses have lost so badly, that they are giving up the business in despair. Now we do not mean to advise such a course, but we would like to hear from those who have made similar experiments: was it the chaff, the straw mats, the double walls, the corn fodder, etc., that saved your bees? or would they have lived equally well with good stores and nothing over them at all?

(Continued from Index page.)

Implements for the Apiary: Apr. Supplement
Imported Queens: Dadant & Son
Paint: Averill Chemical; Jan. to Dec.
Potatoes: A. J. Fisher; Oct.
Poultry: D. E. Moore; June.
Pollen Plants: J. P. McElrath; Apr. May; & Oct.
Periodicals: Bingham's Agency; Jan. to Sept. H. A. King; Jan. to Apr. *Bee World*; Jan. to Dec. *Fruit Recorder*; Jan. *Ann. Bee-Journal*; Jan. to Dec. *Bee-keeper's Magazine*; Jan. to Dec. *Southern Farmer*; Jan. & Feb. *Ohio Farmer*; Feb. & Mar. *Prairie Farmer*; Oct. Geo. O. Tompkins; Dec. J. H. Nellis Dec.
Queens: G. W. Dean; Jan. to Dec. R. S. Becktel; Jan. to April. M. E. McMaster; Feb. to Dec. J. Oatman & Co.; Mar. to Dec. Eli Coble; Feb. to Dec. C. Gould & Co.; Apr. to June. Dr. W. P. Moore; Apr. to June. J. M. C. Taylor; Apr. to Sept. Barnum & Peyton; May to July. A. J. Weidner; May to Oct. J. H. Nellis; June to Sept. H. Nesbit; July to Sept. S. F. Newman; July. J. Shaw & Son; July. H. Alley Aug. J. S. Woodburn; Sept. & Oct. Jos. M. Brooks Oct. to Dec.

Raspberry: Thos. J. Ward; Apr.
Seeds: B. H. Stair & Co.; Feb. & Mar. J. Vick; Mar. to Sept. Beach, Son & Co.; Mar. to Sept. Seed Ware House; Nov. & Dec.

Honey Jars: Ch. F. Muth; year; B. L. Fahnestock; June to Dec.

Honey Plants: Kruschke Bros; Mar & Apr.

Trees: A. A. Battles; Jan to Mar; J. C. Green; Mar to June.

Honey Boxes: Barker & Dicer; Apr. to Jun. Cards. R. M. Clark; April & Dec. A. Snow; July. W. W. Adams; July.

Catnip Seed: J. L. Wolfenden; Jan. to Mar. A. A. Rice; Jan. to June.

Empty Comb: J. H. Martin; Apr. to June. D. L. Scott; May.

Engraving: Miss E. S. Fuller; Dec.
Extractors: A. I. Root; Sept.

Farm: G. M. Dale; July & Aug.
Feeder: C. G. VanDeusen; Apr. to June.

Glass Cutter: G. O. Tompkins; Feb. & Dec.
Hives: Geo. T. Wheeler; Jan. to Aug.; Chas. F. Muth; year; Keyes & Finn; Mar. to May; D. L. Scott May; J. H. Martin May & June; Wm D. Zell June to Nov.

JUST BEFORE GOING TO PRESS.

IN planting grape vines for shading bee stands, how far apart should the rows be, that a front row will not hinder easy access to stands in the rear?

Our own are about 5 $\frac{1}{4}$ feet, and we find ample room for working. The vines are 6 feet apart in the rows, which brings the hives 6 feet from centre to centre in all directions. See Lithograph.

Is a hive after style of Langstroth with *dead air space* for protection, worth the extra cost of making over thin hives of inch stuff?

J. N. WHITE, Wolf Creek, Pa.

Double walled hives have not proved any better than those of single walls, we believe, although they have been warmly advocated for a time. Many experiments have been made, and some are still in progress.

Will bees work in metal or paper combs, if made nearly perfect?

They will work in combs made of metal when coated with wax, as Mr. Quinby demonstrated; but they are very apt to pick at paper, and finally tear it entirely out. We have combs in use that are built on a very thin paper, dipped in wax and pressed in dies to stamp the bottom of the cells.

Enclosed find a sample, plucked to-day, of what I consider the best honey plant for this year. Name it. Blooms from Aug. till first of Nov.

M. S. KILBY, Sherman, Texas.

Order, *Compositae*; family, *Boltonia*; species, *Diffusia*. We confess that the foregoing does not give us a large amount of information in the matter, even if it was pointed out to us in the Botany. The plant probably is peculiar to your southern country; it more nearly resembles some species of our Golden rod, than anything else we know of.

I had one swarm on my scales which gathered, built comb, and stored honey in small frames, at the rate of 8 $\frac{1}{2}$ lbs. per day, for several days.

ALBERT POTTER, Eureka, Wis.

REPLY TO JAMES HEDDON.

I commenced with 55 out of 100 and increased to 105. Late and early frosts made this a poor season. I took 100 lbs. box honey, 2000 lbs. extracted, and \$10. worth bees-wax. I rec'd for all \$535.00. My out-goes are \$100.00 interest on amount invested, 40 days work at \$2.00, —\$80.00, honey boxes \$20.00, leaving me \$355.00 profit. Corn is 20 cts. and potatoes 12 $\frac{1}{2}$ cts. per bushel. I can raise a pound of box honey with less expense than a bushel of corn, and one pound of extracted honey for less than a bushel of potatoes. One season with another, I can make more from one stand of bees, than from a cow or an acre of ground.

D. D. PALMER, Eliza, Ills.

Our bees are ready for winter, 50 colonies in number; though we had to take up perfectly pure swarms to do it. You wished for a report of my daughter's one hive. This hive, kept for box honey last year, was crammed full of bees in the fall and wintered excellently. We made an artificial swarm from it in April, and have from it, 5 full and 4 nucleus swarms.

Sold 150 lbs. of honey in comb for \$50.00, and six pure queens for \$12.00. The new swarms would be worth \$50.00, all making total profit \$92.00.

J. L. DAVIS, Delhi, Mich.

Honey Column.

MR. A. I. ROOT:—In reply to yours of the 28th, we would say we do not wish to buy any extracted honey, as it is mostly used to manufacture counterfeit honey to be peddled about the city.

B. H. STAIR & CO., Cleveland, O., Oct. 29th. '75.

Very likely this is the case in almost all cities, and if so, what is to be done about it? In Dio Lewis' book entitled "Our Digestion," he advises that we buy only comb honey, as the liquid is always adulterated. A friend, in

commenting on OUR HOMES, says, "There are plenty of honest men who are not good Christians, and many more good Christians who are not honest men." If *good Christians* are not honest men, what in the world is to become of us all? If milk is not milk, and honey is not honey, and Christians not Christians, our people are in a bad state, certainly, and we might come to the conclusion that everything had better be allowed to "slide," were there not such an everlasting clamoring on all sides for that which is genuine. "I am willing to pay for gold, and *I want gold*," says a customer, with an air that seems to imply, "Humbbug the world as much as you like, but *I must and will have the genuine*." We have been told that a great bee-keeper purchased the heaviest glass he could get, for his honey boxes, as he sold box and all by the pound, and there was quite a *saving*(?) by using heavy glass. You perhaps don't do that, but are you sure *you* would use the *lightest* glass, if you found it to answer just as well otherwise? If each one of us could be brought to see that we are not perfect, and to make a sincere resolve to try to be more honest than we have been in the past—to be as genuine as we would have others, would not the result be *real* honey and *real* Christians—according to the dictionaries?

We have already retailed a barrel of clover honey at 20c. In the city of Akron, 20 miles distant, they retail it at 40c., in jars without labels, and would sell it no less, if jars were furnished, yet we offer them the honey for 15c. by the barrel. Who is to blame here? That such clover honey as we are now selling, would sell in every town at 20c., and that all of our bee-keepers could not begin to supply the demand if furnished to the consumer at that price, we firmly believe. If you will read over the honey column for the past year, and *act* on its teachings, you certainly will sell all you have, at good prices. Teach the world that *bee-keepers are honest*, even if all the rest of mankind persist in calling syrup and glucose, honey; and *hypocrites*, CHRISTIANS.

I have on hand, about 600 lbs. of honey in caps, from 15 to 20 lbs. each. Where will I find the best market? Where do you sell your surplus honey? Where can I buy a good work on bee culture?

Wm. H. PAGE, Bronson, Mich.

At 13 cts. net, 2000 lbs. basswood honey, in four barrels, all cashed.

JOSEPH DUFFELER, Wequiock, Wis.

VARIOUS ITEMS.

DEAR GLEANINGS:—Do you not think Novice a little deranged, inasmuch as in years past he has taken Jasper Hazen and others to task, for claiming that certain fields were overstocked with bees, and *now* on page 119, present Vol., he says, "we have satisfied ourselves that our bees seldom work more than one and a half miles from home?" If this is the case, why would not 10 or 20 stocks overstock a field in a poor locality? Now, we do not believe in overstocking a field with 20 swarms, for the reason that facts prove that bees go, from choice, at least four miles.

We will give the facts and let the readers decide who is right. The spring after the Italian bee was introduced near us, (that being at least three miles in a straight line) and before we had any Italians, we were watching the bees at work on apple blossoms, and presently we saw an Italian. Upon examination we found that on an average, one bee in five was Italian, and this, with apple blossoms in profusion everywhere. Again, in May, as we were cutting a field of clover, one mile from home, or four miles from these same

Italians, we saw bees at work on the clover. Having heard so much about Italian's working on red clover, we got off our machine and to our surprise counted five Italians to two blacks, with fields red with clover everywhere. Once more and we have had our say. One year ago last August, there was not a piece of buckwheat in sight of our apiary, and the nearest of any amount was five and one-half miles in a southerly direction, where there were from 20 to 30 acres. We sold 900 lbs., and our bees wintered on at least 2500 lbs. buckwheat honey. We will say, using the words quoted above, we have satisfied *ourselves* that bees go from five to seven miles from home for honey, and that when honey is plenty everywhere.

On page 114, we see Ben. S. Cole, had trouble with his extractor. We found ourselves in the same dilemma when we rec'd our extractor, but to think of shortening 1000 frames was more than we could endure for one extractor, so we took off the arm and filed it off just above where the frames revolve, and all went well. It seems strong enough for aught I can see. Of course the hole made for the screw had to be soldered up.

Why does not L. C. Whiting give us the number of colonies he keeps, and the *average* amount of honey obtained from them? It is quite an easy matter to get a large yield of honey from a single colony, but quite another thing to secure 20 lbs. box honey from each of 100 colonies.

We see that J. N. Elliott recommended putting pieces of comb in top of boxes to start the bees working in them sooner. No one should attempt to get box honey, without a starter for each comb that is to be built, and one piece at least, for each hive, should run to the bottom, if not more than one inch wide, that the bees may go to the top of box without having to travel around by the sides. We use from 21 to 30 boxes to the hive and put in, usually, three boxes full of empty comb to the hive.

Has any one tried our plan of introducing queens, given on page 51, and failed? We have not had a single failure after three years trial, and think it the least trouble of any way we have tried.

We have had about 20 inches of snow in this section, but it is mostly gone now, the bees having a fine fly yesterday. G. M. DOOLITTLE.

Borodino, N. Y., Nov. 13th, 1875.

A radius of 1½ miles would cover an area of nearly 5000 acres; are not you the one who is deranged, friend D., when you intimate that 20 colonies might overstock such an area? When white clover and linden are in bloom we have not found many Italians more than a mile from home, but late in the season when forage is scarce, we have found them as far as 3¼ miles. Friend Shaw lives about 3 miles, we think, from a swamp that yields much fall honey, but he has for two seasons past found them to do so much better within one mile, that he has made a suitable wagon and now moves them the two miles into the yard of Mr. Daniels, of Lodi; will the parties correct us if we are wrong? In our own vicinity we cannot find that the yield per hive is any less in apiaries of 100 stocks, than where only a half dozen are kept. We have reports in our back numbers, of linden honey having been brought over 3 miles, but it was decided we think, that such long flights were rapidly destructive to the wings of the bees—you have all observed how they get worn down to jagged stubs during the linden bloom. Those who have been moving bees can probably give us light on this, which is really an important subject. So long as there is such diversity in the size of frames it is really difficult to avoid an occasional blunder, but friend D's plan is much the easiest where there are many frames all alike, and *we* will try to leave a larger margin in future.

Mr. Whiting has only about a dozen colonies now, as he was obliged to destroy his whole apiary to rid it of foul brood; it has raged fearfully in some parts of Mich.

Heads of Grain, FROM DIFFERENT FIELDS.

DEAR EDITOR:—I had 11 swarms in the spring which I increased to 33 good strong swarms. I have taken something over 600 lbs. of box honey, but the early frost cut off the fall gathering. My bees are in the Langstroth hive—mostly Italians, shall Italianize all in the spring. I had a lively time in August, two and three swarms coming out at a time. I lost some. I winter in the cellar, did not lose one swarm last winter. I have offered 10 swarms of pure Italians for sale at \$12.00 per swarm, as I cannot get them all into my winter quarters. They are good strong swarms. I had one swarm in a glass hive on exhibition at our county Fair. It was very much admired. They gave the first premium on my honey in Baker & Dicer's section honey box. I hope to send you some more subscribers for GLEANINGS. I divided my bees, and in August they took the work into their own hands, but most of them to their astonishment, found themselves back in their hive minus the Queen cells. T. D. WARD, Lawton, Mich., Oct. 27th, '75.

Last April I bought three swarms of black bees in box hives. I moved them home fourteen miles in a spring wagon, transferred them into American hives in May, and in June divided each swarm. In July my six divided themselves, that is, swarmed. The twelve swarms are in good condition for winter except one, which has too few bees. Last week I bo't a large swarm of a man for a half dollar, took them out of the hive and took out the honey for him. I brought them home in a box, made a hive double width and put a wire cloth partition through the middle, put in my small swarm, then wet the swarm that was in the box with sweetened water and put one-fourth in with the small swarm, and the balance with their Queen into the other part of the hive. I took combs from other hives for the new swarm. They clustered as one swarm but the cloth kept them apart. They seem to like their new home, the entrances to the hive are on the front, are 24 inches apart and a board separates them on the door step.

W. A. EDDY, Easton, Wis., Oct. 19th, '75.

Put a solid tight division board in place of, or besides the wire cloth, or you will be pretty sure to lose one of the two colonies; see page 74, Vol. 2.

The Los Angeles (Cal.) Herald says that at the present rate of increase it is estimated there will be in four years one million stands of bees in Los Angeles, Santa Barbara, and San Bernardino counties, which will produce annually one hundred million pounds of honey, worth \$20,000,000, which is more than the value of the sugar and molasses crop of Louisiana, Texas, and Florida combined.

As a general thing we object to publishing predictions, whether like the above, or to the effect that the honey business is overdone and is about to sink into insignificance, as our friend Heddon seems to think. There are two extremes in this as in all other things, and we think it much the most profitable to consider the present, to expect just about such seasons as we have been having, and to be prepared for lower prices, if they come; if they don't come, we will try and stand *that*. When items like the above come floating about in the papers encouraging either extreme, we think it a duty to give a little caution.

I got some half dozen dollar Queens of Dr. J. P. H. Brown, of Augusta, Ga., and safely introduced all but one. I also got of Mr. J. H. Nellis, Canajoharie, N. Y., a dozen or more, lost out of the lot some three or four. Also got of Dadant & Son, an imported Queen. Those I got of Brown all turned out well, all being well marked. Those of Nellis also; in fact two that I got of Nellis show as fancy a bee as I ever saw, being very light, while two of his Queens were very dark, the progeny of which are a dark leather colored bee. In ordering of Dadant, I wrote for a light colored Queen but didn't get it. Now we have all been educated to look upon the pure Italian as a light golden colored bee, but latterly I notice quite a

number speaking of them as a dark bee. Would like to hear from you and others through GLEANINGS on this subject.

Wm. J. ANDREWS, Columbia, Tenn., Oct. 21st, '75.

We have never seen a genuine imported Queen that was light colored, but their daughters, many of them, will be quite light, and by selecting these to rear from we can get grand-daughters that are as yellow and golden as any one could wish. Our objection to these beautiful light colored bees, is that they are lazy; when winter comes they have to be fed, while the dark bees with three leather colored bands are all in winter trim. Do you know that 100 colonies of bees that will gather enough in the fall to winter are a much stronger argument than 100 of "golden bees" that need 10 lbs. of sugar each?

Seventy-five cents for your bee veils is too much.

GEO. PERRY, Peru, Ills.

That is right, talk out just what you think. The principal expense of the veils is the silk lace for the face, and unless we use some cheaper material, we cannot well get them up ready to mail for less than about 60 cents. If you try looking through different material, wire-cloth, etc., you will at once see why we have decided on something that is light and strong, even though expensive. When looking for Queens and eggs, we want all the eyes we've got, and if there *must* be an obstruction, it should be the least possible. Send us a cheaper one and if as good we will adopt it and thank you.

The brood you sent me came on Wednesday, so I conclude it was three days on the road. The box was all in pieces, the paper was around the comb all right, but the largest of the grubs were nearly out of the cells. I gave it directly to the bees and they started six cells, in ten days I put five of them in a small lamp nursery. The next day on looking in I was surprised to find one of the Queens out, and she had gnawed in to and destroyed two of the cells. I took the young Queen to the hive where my non-laying Queen was, and after removing her, let the young Queen go on one of the combs. The bees caught her right away, and for fear they would kill her I put her in a cage, let her stay over night, then sweetened the bees and left the cage open. In a day or two she was missing. Of the others suffice it to say I have but one. Please tell me if it makes any difference whether the cells are put into the nursery as soon as sealed, or if they are within 24 hours of hatching.

S. H. HUGH, Rootstown, O., Oct. 9th, 1875.

Your Queen behaved precisely as ours do when they have been hatched too long; if you look at your nursery the last thing at night and first thing in the morning we think you will have no such trouble, providing you put them into the hive as soon as they are found out of the cell. Your one Queen is probably worth all your trouble, and you will be sure to do better next time. If the cells are kept carefully at a temperature of from 90 to 100 degrees, we think they are just as good as if left in the hive, but if you cannot be sure of this you had better let the bees have them until they are ready to hatch.

Saw your advertisement in *American Agriculturist*, of GLEANINGS IN BEE CULTURE.

The above was all that was to be found on the postal, not another scrap of information of any kind to be seen. It is quite consoling to our feelings, unknown friend, to hear that you did notice it, but for the life of us we are unable to cipher out how we are to serve you, unless you will be kind enough to tell us who you are and where you live.

A. I. ROOT, Sir:—The Alsike clover you sent me is full of sorrel, and any one having eyes can see it, too. Now, Mr. Root, if you don't send me one pound of pure Alsike, I will advertise you in every Bee Journal in the United States. The land on which we sowed it, never produced sorrel and now the ground is covered with it, and scarcely a clover plant to be seen. I pulled two bushels of sorrel out of the patch in about five weeks after it was sown. I don't care for the money, but would give \$5.00 to have the land rid of the sorrel. I thought you were honest but find you not. I was about to send for your GLEANINGS, but finding you dishonest I don't want to read it.

M. E. LOEHR, Palestine, Ind., Nov. 1st, '75.

We have many times spoken with pride, of never having had one unreasonable customer in all our dealings with bee-keepers; that is, after we had shown a spirit of liberality in settling all misunderstandings. Our experiment on humanity depends on the decision of our friend who writes the above and his reply will be given next month.

We can find no sorrel seed with the clover, nor does any sorrel appear when the same seed is sown on our soil, yet we will pay Mr. Loehr for the seed, as we proposed long ago, and will also pay him whatever damage he thinks is right, *if he still insists on it*. The seed we sell was raised in our own neighborhood, and we don't know where to get any better. We have sold it extensively with no other complaint.

A. I. ROOT, The Medley of pictures of Bee-Keepers which you so kindly sent me, came duly to hand, for which please accept my thanks. Your picture presents an array of earnest workers, alike creditable to the cause and to the enterprise of getting up the same.

I note the niche with a name therein. It were well to leave a niche for the person who may hereafter advance the cause of bee culture, but it certainly is premature to thus insert a name.

I am pleased to note the improvements made from time to time, in the matter of your Journal.

J. S. HARRISON, San Diego, Cal., Nov. 2d, '75.

Whatever may be Mr. Harrison's opinion in the matter, we feel sure that the bee-keepers of our country would be very glad indeed to have the privilege of placing friend H's photo in the vacant niche.

I am a subscriber to GLEANINGS, and have read it carefully this summer and fall, with a view to making a start next spring as nearly right as possible, with the experience of others as my guide. My great trouble is to decide upon a *hive* and the *dimensions of my frames*. You talked the "Simplicity" into me, then upset my convictions on that point, with the Standard or long hive, with small frames, (as per Lithograph rec'd). I hear a good deal of Moon's improved (Thomas) hive, and am examining that. The more I look into the question, the more befogged I become. And now I ask you, shall I take the Simplicity, or long hive? The L. frame was thought best in a northern climate. Would not a smaller size be better here, where less stores are needed to carry a swarm through the winter? I can get the material (including 16 frames) for a two story S. hive for less than a dollar. Can put it together myself. I will not look further, if you will advise me *decisively*.

Of course I want Italians. Shall I get an imported queen from Dadant next spring, or trust to cheaper stock? I have 10 black colonies and can buy as many more as may be necessary at a low price, in box hives, etc.

Excuse me for troubling you, but I am new in the cause, and I see you sometimes very kindly answer very simple (to you) questions.

R. THOMSON, Terry, Miss., Nov. 6th, '75.

The question in regard to hives is one that troubles all, we believe, unless it be those who are tied to some particular one by a patent or some motive of self-interest. If we mistake not, our ablest minds have decided that it makes very little difference to the bees what the hive is, providing it be made comfortable

for them, i. e., we may have good results from any or all the frames in use, and we may have the hive spread out, or two story, as we find most convenient, providing we give them a convenient entrance, an amount of room suited to their numbers, with more space as fast as increasing numbers demand it, shade, ventilation, etc., so that finally, all we have to decide, of any moment, is what hive will best enable their owner to give them these little attentions with the least labor. Now if any one can tell us whether the demand in future is going to be for comb, or liquid honey, we can tell very quickly what hive *we* would advise. For the exclusive use of the extractor, the Standard hive without hesitation; but if Mr. Long's foundations are to prove all that they promise, we should go back to the good old Langstroth frame, and in fact all things considered, we believe that whatever can be done with any frame *may* also be done with this. If it shall be demonstrated that side boxes have really a positive advantage over top boxes only, we can make some of our hives double width and two story; when we have then placed the brood combs in the middle of the lower story, we shall have room for our section boxes, both at the sides and on top. We have used nothing as convenient for new swarms and for wintering, as the one story, 10 frame Simplicity hive, unless it be the house apiary. With this you can put on boxes or sections, as you wish, and have no outer case whatever to bother with. Don't buy *any* "rights."

I have had an imported queen. Got her about the 15th of July and introduced her to young bees and brood only; but they commenced queen raising at the start and kept it up. I took out some cells, cut out some and united, and took only young bees and brood again; but they kept it up and beat me at last. In about a month she was gone and they raised another one. Now, why was it so? We poor fellows feel a "little blue" to pay \$10. for a queen and keep her only a month. Tell us in GLEANINGS how to do better. But I *must* have another from somewhere for she laid more eggs in 30 days by odds than any other queen I ever had, and she was one of Dadant's *black* ones at that. J. J. WHITSON, Valley Mills, Ind., Nov. 3d, '75.

We cannot answer the question as to why they sometimes persist in trying to supersede a very prolific queen. This season we found a lot of queen cells in a hive, and a young queen just hatched—concluded we had lost the queen while extracting, but while we were hunting up the young queens, we found eggs and brood, and finally the old queen herself. To test the matter we kept her for several months after, and she proved herself as prolific as usual to the last. We killed her a few days ago because she was over 3 years old, and we feared she might die before spring, but we are still feeling sorry we did so.

MR. A. I. ROOT:—About that extractor you sent me last Sept.: it came all right except a few slight bruises. I took it home and tried it the same day, and what do you think it did? Well sir, the way it slung the honey was a caution to the bees. It is a little too nice for me to describe on paper, it works like a charm. I am so well pleased with it I have to show it to all who come, and all the bee men here who have seen it say they will have one. I think you will get orders for several from this vicinity next season.

The honey knife also does nice work without hot or cold water. Thanks for the sample frame with metal corners. I think they are a great improvement. You will probably get orders for some of them next spring if bees don't all die this winter.

J. S. BRINTNALL, Hudson, Ills., Oct. 21st, '75.

IN REGARD TO KILLING DRONES.

I have often read that bees kill their drones as soon as storage becomes scarce, but with me, this summer, it has been quite the reverse. During the blossoming of my silver hull buckwheat, while my bees were so busy they hardly knew what to do, they commenced killing their drones. They tore every drone cell open, pulled out young drones by the hundred and stored honey in place of them. I was well supplied with surplus boxes, but some of them thought they could do more than fill the boxes, and commenced building comb outside of the hives. I told my wife that I did wish Mr. A. I. Root were here with one of his extractors; we would make him believe he was in California. I think if I could have had 100 colonies this summer, I should have made money enough to travel through the United States and see some of my brother beekeepers. D. N. KERN, Shimmersville, Lehigh Co. Pa.

The Queensland government has appointed as Commissioner to represent our country at the Philadelphia Exhibition, one of the most practical and experienced men in the colony, A. Mokz, Esq., who will leave here by the steamer Mikado, on the 25th of Oct. Mr. Mokz will make a tour of such of the states of the Union as may be likely to furnish, in the shape of progressive apiculture and settlement, lessons worthy of our adoption. Now, Novice, if any of your apiarian friends can pack a colony or two of Italians so that they will stand a journey of about 6 weeks, I hope they will not be backward in saying so. Mr. Mokz will wait in San Francisco 10 or 12 days if bees can be sent down in time for him to ship them before he proceeds farther. Now I hope you will have the kindness to give this publication in your honey Journal, for it will not only prove beneficial to us, but to you also. Will you kindly inform our Commissioner where a foot-power buzz saw for hive making can be had? I want it complete, all ready for work. In conclusion I have to say that those wishing to prepare bees for Queensland will please address their letters to the Queensland Commissioner, Prairie Farmer's office, Chicago Ills., and California Farmer's office, San Francisco, Cal. J. CARROLL, Mohawk Valley, Enoggera, Queensland, Sept. 14, 75.

Find enclosed my report for 74-75, showing that even in north-western Iowa, bees can be kept and make a fair showing. Commenced bee-keeping in the summer of 1874, by the purchase of one colony of black bees. From this colony 32 lbs. of honey were taken and an increase of one colony. These two colonies were wintered in cellar and came out in the spring in fair condition. In spring of 1875 added by purchase, two colonies, one Italian and one black. During the season the stock was increased to 9 colonies with ample stores for wintering. In addition to increase I have taken 165 lbs. of nice comb honey in boxes and small frames. One colony of blacks gave 69 lbs. in small frames. This stock was not divided until the last of Aug. I go into winter quarters with 10 colonies, one small colony of pure Italians purchased from Mrs. E. S. Tupper, of Des Moines, rec'd in Aug., and built up now very strong. I will say right here, that I prefer the Italians, from the fact that they will keep their hives clear of the moth worm by politely showing them the way out. Success to you in wintering.

D. PATTERSON, Algona, Iowa, Nov. 2d, 75.

Recapitulation, 1875.

By 10 colonies @ \$10.....	\$100.00.
165 lbs. honey @ 25c.....	41.25.—141.25.
Dr.	
To 4 colonies in spring.....	\$40.00.
1 colony pure Italians.....	12.00.
Material for hives.....	7.50.
Bee Journals and books.....	3.25.—62.75.
Balance in favor of bees.....	\$78.50.

Should the bees be kept in the lower story until the swarming season is over?

If your object is increase of stocks by natural swarming, not otherwise; and we do not know why you need an upper story in such a case, for after a swarm had left, they would be unlikely to go into an upper story at all.

Should empty frames be put in the centre, or at the sides?

If you put an empty frame in the centre it will likely be filled soonest, but it would be pretty sure to be filled with drone comb if the

colony is strong. Therefore, you should either provide yourself with empty worker comb for this purpose, or use the comb-foundations.

How can I prevent my bees building so much drone comb?

See the articles on this subject in Vol. II, and answer given above.

What makes my bees swarm so often when they have from one to three empty frames in brood chamber, and their queen cells destroyed every week? I notice where they are so persistent in swarming the queen lays but few eggs.

As we have often said before, we know of no certain remedy for swarming except the extractor. To keep the queen laying without it, you will have to let them swarm, and when they have commenced work in the new locality carry the parent hive to them, unfinished boxes and all.

We at one time had six glass vases on a hive, but the bees were dissatisfied with the glass sides and swarmed out before they were half filled. We put them back, but they soon came out again and the third time they were allowed to settle and then hived in a new locality; when they were fairly located, the old hive, vases and all, was brought to them; they went in at once and went to work as though they had a new hive instead of the old vases they had been so determined not to finish. We once before made a similar experiment, and the bees that were bent on having a new hive, even when they had an empty frame between every two combs, went to work with vigor after the hive had been moved a rod or two and they had been shaken down in front of it; to manage thus, the queen's wings should be clipped, and the apiary must be pretty closely watched during the swarming season.

In letting them up into the supers, would you put one frame of comb in the centre, or at one side, or none at all?

If you use the extractor, put as many empty combs into the upper stories as you can get, a full set for all if possible, but since experiments of the present season, we rather think we would not raise up any of the brood combs. It disturbs brood rearing, and if the queen should be disposed to keep below, it may be just as well or better, and if we extract only the upper combs, there will be much less danger of the bees getting short in the fall, and they will not be obliged to depend entirely on stores liable to be gathered late and left unsealed.

What does extracted honey generally sell at, per lb., when freely put up in one and two lb. glass jars?

Read the letters in back numbers, and you can see what honey *has* sold for.

What is the best remedy for bee stings?

C. W. HUTTON, Medon, Tenn., May 14th, 75.

Get the stings out and then pay no further attention to them whatever, but go on with your work.

My bees are not in as good condition as one year ago. A good deal of unsealed honey. I could not prevent it, they would not seal it. I fed them, but the weather was so cold could not make them seal it.

J. L. WOLFESDEN, Adams, Wis., Nov. 10th, 75.

We fear your hives are too large, or your bees too few in numbers, friend W. If you fed them, did you not defer it until too late? If it is natural stores to which you refer, it may be rather a hard matter to manage, but we would at all events crowd them up into a small space towards the approach of cool weather.

DEAR SIR:—City Bee-Keeper, in October No. of GLEANINGS, is right in saying that honey contains pollen, as it has been shown by optical and chemical analysis; but not in considerable quantities, as analysis has shown not much over 1 to 1½ per cent; and it depends on what flowers the nectar was gathered from to produce the honey. I say *produced*, as it has been shown by analysis that honey is a production of the bee and not, as is generally supposed, identical with the nectar of flowers. More than half of the sweet matter contained in the nectar is in a state of cane sugar, while this sugar is generally absent or in a very minute proportion in honey. The nectar contains no glucose, while honey contains it in excess. If City Bee-Keeper finds more than 45 to 55 per cent, according to the honey, of glucose, he may rest assured that the honey is adulterated with glucose. I will shortly give more explanation in regard to the difference between the nectar when collected from flowers and honey after being deposited in the cells.

I will conclude by stating that the Grand Southern State, and Industrial Exposition will be held in New Orleans on Feb. 26th, 1876, and continue 10 days. And as apiculture is taking a new impetus in this state, I think it would be well for apiarians to expose their apiarian supplies to introduce them.

To those who are not able to attend the exposition, I offer my services to represent their hives, extractors, etc. For my part I have nothing but honey to expose. I use Novice's Standard hive and extractor, but will not expose them unless Novice sends me one for that purpose.

P. S.—My object in offering my services to bee-keepers, is not to make money, as I offer them *gratis*, but to stimulate bee-keeping in the south.

Bayou Goula, La., Oct. 18th, '75.

We do know that a great variety of syrups fed to bees *taste* precisely the same after having been taken from the cells, but do not know about the chemical composition being altered. Sugar fed to bees is never made into honey.

We are quite willing that our goods shall be exhibited if the owner thinks them worthy, but we prefer letting them make their way on their own merits.

A. I. ROOT, Dear Sir:—I commenced an Apiary last spring by buying a swarm in a box hive. While waiting for it to swarm I purchased two young swarms and put them in frame hives, but I have nothing from the box; been waiting and watching for a swarm up to the present time, but none yet, unless it came out while I was celebrating on the 5th. I left them at 10 to 12 o'clock, they appeared as though they might have swarmed and gone to the woods, but am not certain. If it did swarm at that time it ought to have sent out another before this time, for the hive is strong in bees and stores, even crowded; but they act queerly to me. I can see no reason why they do not swarm. There has been much swarming here this season and the honey harvest continues good. They seem to be very much excited, running over the outside of the hive with their wings raised and chasing each other around; so cross can not go near them. They play out in the afternoon, have plenty of drones and appear to be carrying out immature ones, as I find them in front of the hive. Do you think they are Queenless? If they are, and have not swarmed at all, they ought to have brood from which to raise another. If they have swarmed they may be without Queen or brood, the young Queen perhaps having been lost.

N. A. PRUDEN, Ann Arbor, Mich., July 22d, '75.

The above gives a very fair sample of the inconveniences of a box hive. Had it been a frame hive our friend could have looked it over much easier than to have written us for advice. There is probably nothing wrong with the bees more than that they have filled their hive, and concluded to take it easy, calculating that you can neither make them swarm nor gather honey unless they choose. Why did you not transfer them and *make* them do something? If we lived in Mich. we should try to give our bees a proper understanding of what was expected of them.

I rec'd your July sample of GLEANINGS. Then forwarded \$5.00 by mail in registered letter, which you rec'd. Now I want and *shall* insist on all the Journals

or their equivalent. You there offer in your clubbing list, the *Bee World* and *National Bee Journal*, which have not yet been received.

JEREMY LAKE.

North Easton, Mass., Nov. 1st, '75.

Friend Lake we hardly think you mean to write unkindly, but when one is doing the very best he knows how, do you know how such harsh expressions hurt? Your letter reached us on the 21st of Oct., and we promptly sent orders to all the other Journals; as such things unavoidably take time to get round, it is not very strange that all had not reached you at the date you write, especially the *Bee World*, as it is so far South. When you think you have waited long enough, drop us a postal of course. But *please* speak pleasantly. You perhaps do not realize that we make it a study to avoid mistakes and misunderstanding, and that when anything *does* get wrong, we at once set about righting it. Anything on our price lists, we can usually forward promptly, but after we have sent the orders for other Journals, we have done all that we can do. At the very low price we offer honey labels, there is often a delay in their manufacture, and as a stock cannot be made up ahead, they are at some seasons unavoidably delayed from one to three weeks. It is only by careful promptness, that we can feel that pride and independence that every business man should feel, and harsh words are never needed to such an one.

FRIEND NOVICE:—Did you ever make honey vinegar? I think it has been made from washings of cappings, and I have seen a recipe in Adair's Annals, 5 lbs. of honey to 20 gallons of water, but Burch in his book "Money in the Apiary," says 5 gallons of honey for a barrel. Now 5 gallons of honey equals about 60 lbs., rather dear vinegar. I have some very dark old honey, would it make good vinegar? I wish you would tell us "what you know about it."

J. H. MARTIN, Hartford, N. Y., Nov. 12th, '75.

As good cider is usually sold here for about \$2.00 per barrel, or less than 7 cts. per gallon, we can hardly imagine how honey can be used profitably for vinegar. Where it is for any reason rendered unfit for market, it can be saved until the proper time and fed to the bees. For this purpose or at least for spring feeding, it is worth nearly as much as sugar syrup, say 7 cts. per lb. Such refuse we have always found to work in nicely in the spring. In washing honey utensils we frequently get a solution of honey so diluted that it would sour if we attempted to keep it, and in such cases we can probably do no better than to work it into vinegar as we would cider. Also, if we are so unfortunate as to have extracted any honey so thin as to have it get sour, it will perhaps be best to make it into vinegar. The proportion Mr. Burch gives is correct, about one of honey or molasses to five of water for good vinegar, but cheap molasses will probably do equally well. So long as your honey can be sold for, say 7 cts. per lb., it will not pay to make it into vinegar, unless it gives some quality that will enable it to command an extra price in the market.

DO TOADS EAT BEES?

Last summer, in the month of Aug., I think, at dusk, on a very warm sultry evening, as I was walking among my bees, I discovered one hive in quite an uproar, and I could not see the cause until I made a close inspection. It was a Langstroth hive and on the portico was perched an enormously large toad, facing and snapping at the bees, but it was too dark for me to see whether he took them in his mouth. I went to the house for a lantern but when I returned it was all quiet and his toadship gone. Wm. FAYNE, Spencer, Ohio.

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A. I. ROOT, Medina, O.



